Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.







SOIL CONSERVATION SERVICE U.S. DEPARTMENT OF AGRICULTURE

Cooperating with

DEPARTMENT OF ECOLOGY STATE OF WASHINGTON

APR. 1, 1979

TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most af the usable water in western states originates as mountain snawfall. This snawfall accumulates during the winter and spring, several manths befare the snow melts and appears as streamflaw. Since the runoff fram precipitatian as snow is delayed, estimates af snawmelt runoff can be made well in advance of its occurrence. Streamflaw farecasts published in this report are based principally an measurement af the water equivalent af the mountain snawpack.

Forecasts become mare accurate as mare af the data affecting runoff are measured. All farecasts assume that climatic factors during the remainder af the snaw accumulation and melt season will interact with a resultant average effect an runaff. Early season forecasts are therefore subject to a greater change than those made an later dates.

The snaw caurse measurement is obtained by sampling snaw depth and water equivalent at surveyed and marked lacations in mountain areas. A tatal of about ten samples are taken at each lacation. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snaw surveys are made manthly or semi-manthly fram January 1 through June 1 in most states. There are about 1900 snaw caurses in Western United States and in the Calumbia Basin in British Calumbia. Networks af automatic snaw water equivalent and related data sensing devices, along with radia telemetry are expanding and will pravide a continuous recard af snaw water and ather parameters at key locations.

Detailed data an snaw caurse and sail maisture measurements are presented in state and lacal reparts. Other data an reservoir storage, summaries of precipitation, current streamflaw, and soil maisture canditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply autlook conditions, including selected streamflaw forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snaw survey and soil moisture data for the period of recard are published by the Sail Conservation Service by states about every five years. Data far the current year is summarized in a West-wide basic data summary and published about October 1 af each year.

COVER PHOTO: VIEW OF A SNOTEL DATA SITE IN THE SNOWY RANGE IN WYOMING. TALL CYLINDRICAL DEVICE IS A PRECIPITATION GAGE. SNOW PILLOWS ON THE GROUND NOT VISIBLE DUE TO SNOW COVER. SHELTER HOUSE, ANTENNA TOWER, ANTENNA, AND TEMPERATURE UNIT ARE VISIBLE BEHIND THE PRECIPITATION GAGE.

PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Canservation Service publishes reparts fallowing the principal snaw survey dates from January 1 through June 1 in caaperation with state water administrators, agricultural experiment stations and others. Capies of the reports far Western United States and all state reparts may be abtained from Soil Canservation Service, West Technical Service Center, Raam 510, 511 N.W. Broadway, Partland, Oregan 97209.

Capies af state and local reports may also be obtained from state offices of the Sail Canservation Service in the fallowing states:

STATE

Wyoming

A laska Room 129, 2221 East Northern Lights Blvd., Anchorage, Alaska 99504 Room 3008, Federal Building, 230 N. First Ave., Phoenix, Arizona 85025 Arizona Calorada (N. Mex.) P. O. Box 17107, Denver, Colorado 80217 Idaho Room 345, 304 N. 8th. St., Boise, Idaho 83702 Montana P. O. Box 98, Bozeman, Montana 59715 Nevada P. O. Box 4850, Reno, Nevada 89505 1220 S. W. Third Ave., Portland, Oregon 97204 Oregon Utah 4420 Federal Bldg., 125 South State St., Salt Lake City, Utah 84138 Washington 360 U. S. Court House, Spokane, Washington 99201

P. O. Bax 2440, Casper, Wyoming 82602

ADDRESS

PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Snow Surveys Branch, California Department of Water Resources, P.O. Box 388, Sacramento, California 95802 --- for British Columbia by the Ministry of the Environment, Water Investigations Branch, Parliament Buildings, Victoria, British Columbia V8V 1X5 --- for Yukon Territory by the Department of Indian and Northern Affairs, Northern Operations Branch, 200 Range Road, Whitehorse, Yukon Territory Y1A 3V1 --- and for Alberta, Saskatchewan, and N.W.T. by the Water Survey of Canada, Inland Waters Branch, 110-12 Avenue S.W, Calgary, Alberta T3C 1A6.



USDA-SCS-PORTLAND . OR , 1978

WATER SUPPLY OUTLOOK FOR WASHINGTON

and
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

Issued by

R.M. DAVIS

ADMINISTRATOR
SOIL CONSERVATION SERVICE
WASHINGTON, D C

Виниминичникования постоя постоя в достоя в до

Released by

GALEN S. BRIDGE

STATE CONSERVATIONIST SOIL CONSERVATION SERVICE SPOKANE, WASHINGTON

In Cooperation with

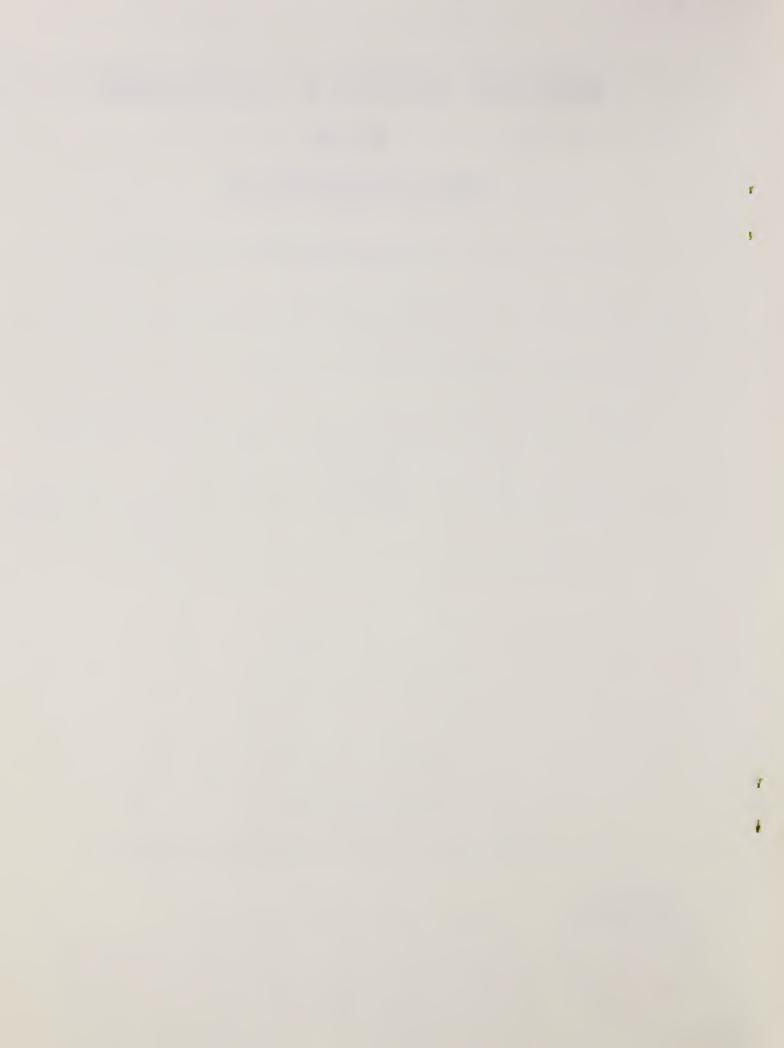
WILBUR G. HALLAUER

DIRECTOR
DEPARTMENT OF ECOLOGY
STATE OF WASHINGTON

Report prepared by

ROBERT T. DAVIS, Snow Survey Supervisor and NORINE P. KENT, Statistical Assistant

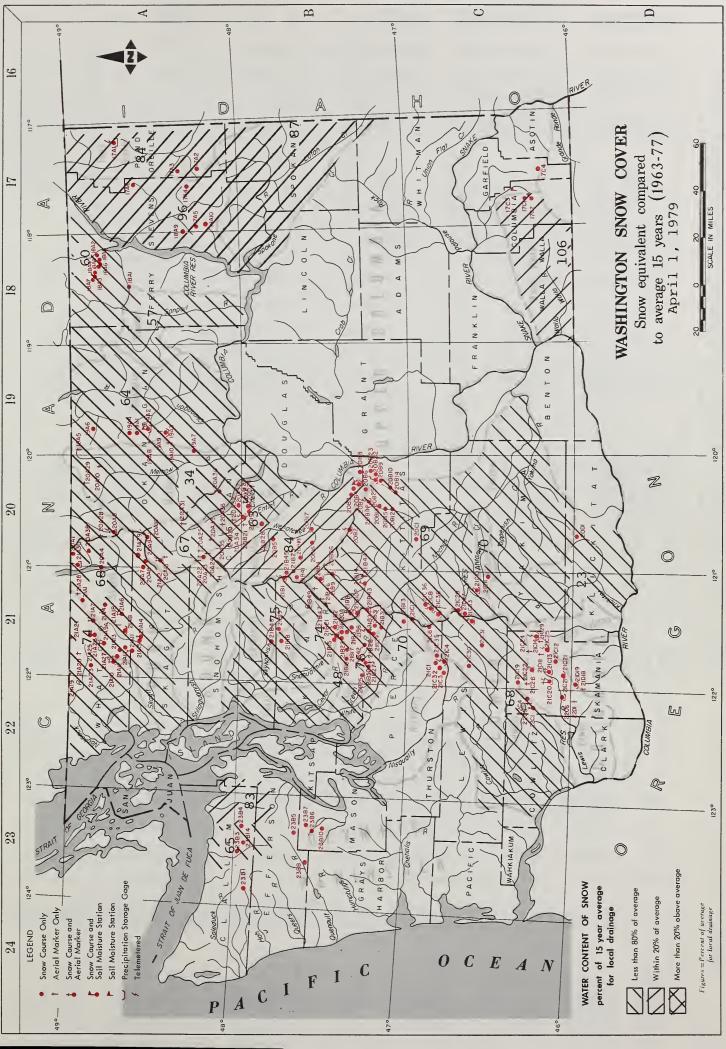
SOIL CONSERVATION SERVICE 360 U.S. COURTHOUSE SPOKANE, WASHINGTON 99201



USDA-SCS-PORTIAND, OR. 1978 PT-OL-

(ב
<	1
	2
Ł.	U
(5
~	1
2	2
-	_
U	2
IACITATION DAG	7
F	_
~	1
H	-
0	_
(ر
П	Ц
٥	Ĺ
_	
1	O
u	0
SIACITATORIC	STORE STATIONS and PRECIPINATION STORAGE SACS
7	7
-	_
_	1
F	_
U	0
ш	u
0	4
Ξ	_
Ü	7
7	5
4	S
IGITALON IIOS	
=	_
)
U	7
.,	
ŭ	زُ
U	3
0	<u>ح</u>
OHDOFO	つしつこう
0)
•	,
3	>
-)
-	7
U	5
_	,
4	-
()
-	_
2	,
4	=
Ξ	_
U	2
<	L
3	>
,	
+	_
>	<
Ĺ	Ĺ
	١
4	=

	ELEV.	2200 3680 5900 3500 3500	2800	4900 3800 5200 5400 3600 5800 5100	3400 2200 1600 4500		5100 3700 4300	5200			5200	4500	4500	4200 4700 3000	3900	3900			G a g e
	RANGE	12E 12E 16E 16E 16E 16E	146	76 86 116 116 96 86 86 86	888888		7E 8E 9E 9E	₩			9W	%	≥	28% 80%	<u>\$</u> }	}		Station	Storage
3ES	TWP.	8664884488 XXXXXXXXX	35N 35N	338NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN	XXXXX 333333		X X X X X X X X X X X X X X X X X X X		ΓĄ		28N	Z 26 2	29N	24N 24N 23N	25N 24N	28N		al Marke Moisture	Gage
SAG	SEC.	35 35 36 34 14 18 8 8 8 9 25		7d 17 1A 8 17 7 31 7 31 A 23 AP 20		River	94 7 04 20 3 9-10 6 17	92	PENINSULA	River	eek 1	4 31 ver	36 River	71 0		14		Daly Only And Aeri	Station and Prec Storage
ie G	NUMBE	214 214 214 2142 2044 2041 2043 2043 21429	20A7 21A30P er Rive	21A27a 21A11A 21A7A 21A6A 21A17 21A17 21A18a 21A18a	21A10 21A1 21A1 21A1 21A1 21A1	sack Rive	21A19a 21A20A 21A23 9- 21A26 1	21A2		Dungeness Rive	2384 orse Creek	23B14 3 Elwha River	23B3 36 omish Rive	2387 2386 23810	2385 2388 duck	2381		Course Course Course A	Course A Course A Hatlon
8 A G		Skagi	Bak			Nook	,		OLYMPIC	Dunge	×	ΕIw	Skoko	80	Sole				Solf Moistu Snow Cours Precipitation
STORAGE		Beover Creek Trail Beover Pass Brown Tap Brown Bap Devils Park Freezeour Greek Trail Freezeour Medows (N- Granite Creek Mandrows Cahins	en Lake		r Creek				0					iite iite Lakes	- Jome			21 A 7 a 21 A 7 M	21 A7 P 21 A7 P 21 A7 P 21 A7 SP
		Beaver Creek Beaver Pass Brawn Tap Devils Park Freezeout Cree Freezeaut Mea Granite Creek	New Hozomeen L Thunder Basin	Baker Pass Dock Butte Easy Pass Jasper Pass Komo Kulstan Marten Lake Maurt Blum Racky Creek	ibers Me Thundel Jr Creek Mile Ci		Bald Mountain Canyan Glacier Creek Panarama New	Lakes			Park	alley	gue	Black and White Black and White La Faur Stream	Sweet I wn Pass	Lake			
0	NAME	Beave Brawn Devill Freeze Grani	New	Baker Dock Easy F Jasper Komo Marte Mauni Racky	Schrei S. F. Sulphi Three Watso		Bald / Canyo Glaci Panan	ĭ. i.			Deer	Cax Valley	Hurricone	Black Black Faur	Hame	Deer Lake	1		
ECIPITATION	ELEV.	3800 3200 3100 4400 2100 3400	3000	5300 4100 2200 2870 5900 3250				4550 2760 5500 5050		0009	1800	2200 2200 3200 3100	4000 5000 3860	4100	2390 3300 2500	30000	9	3500 3625 1900	2900
SCIP	RANGE	25 25 25 25 25 35 35 35 35 35 35 35 35 35 35 35 35 35	98 9	106 106 106 116 88				88 8E 8E 8E		11E	11E	9E 8E 10E	3E	IIE	106	96 10e	2	9E 11E 9E	10E
PR	TWP.	Q & & & & & & & & & & & & & & & & & & &	Z Z	2222222 202222222 2022222222			A G E	157 157 157 157 157 157 157		Z ₈		ZZZZZ S S S S S			22 Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z	2222 2222 2222 2322 2322	7	27N 22N 26N	26N
=	SEC.	sentinu SP 8 24 36 37 37 35 37 37 37 37 37 37 37 37	21C24a 20 21D18a 36 litz River	15 2 28 2 28 1 21 3 11 3 11 3 3	ļ		DRAINA G River	P 23 29 5 13 13	ve.	33	Kiver 1824P 18	21842SP 21 21842SP 21 21827 14 21828 12 21829 36	35Pp14	B30 18 River		2418		31 26 33	River 33
	NUMBER	21C26P 22C5a 22C5a 22C6P 32C6P 32C1a 22C1a 22C4 21C13AP1	21C2 21D18 w litz	21C6 21C19 21C32 21C31 21C33P 21C14P			UND	21C4P 21C3 21C35 21C1	ite Rive	21813	2182,	2184 2182 2182 2182 2182	21850 2183 2184; 2184; 21816	21B3(Jar Ri	2183 2182 2182 2182	21815 21817 2186 2186	z lozu J m i e	21848 2182P 21818	mish R 21819
STATIONS	i	. <u>.</u>	ô				PUGET SOUND Nisqually		Whit	(2	3.2		ő			nbou		Skyko
TAT		Lew liter (iver liver and and	. <u>.</u>	daws			PUGI	(New)				is i			Aux.	on	۷,	ows +	ح
		Le Lane Pine Shelter Marble Mauntain New Muddy River Oldman Pass Plains of Abraham Smith Creek Raad Spenise Lakes	Maunta red Peal	Cayuse Pass Masquito Meadaws Ohanapecash Packwaad Lake Pigrail Feak Patara Hill Willame Creek				Ghost Farest Langmire Paradise Park (New) Stem Glade		Carral Pass	. <u>e</u> .	Caugar Mountain Grass Mountain N Grass Mountain N Grass Mountain N Lester Creek	Lake ill Ridge shoe But ede Pas	Gmp	Cabin Gardner Gardner Aux	Mt. Washington Rex River Sauth Fark Cedar	5	Alpine Meadow Olallie Meadaws South Fork Tolt	Lake Elizabeth
MOISTURE	NAME	Lane Lane New / New / Oldmc Plains Smith Spence Surprise	Table Timbe	Cayus Masqu Ohanc Packw Pigtai Patata				Ghost Langn Parad Stem		Carra	Airstr	Cauge Grass Grass	Sawm Snows Stamp	Twin .	Š Š Š	Rex R Sauth		Alpin Olalli South	Lake
OIS	ELEV.	5300 4300 4400 3400	4450 5000 4400	3100 3200 3450 3400 4600 5370 2200	371 330 330 330 330	35	00 50 50 25	200			1		9200	3370	0	4030	4000	888	4200 5600 3500
			44,4	www.44449	9, 2, 2, 4, 2, 4, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2, 2,	188	24 33 38 54 65	8 8 4 4			1		(7)	₩ ₹	4	4	9	48 22 25 25	400
	RANGE		20E 20E 20E	200 200 200 200 200 200 200 200 200 200								ıщ	40E 5	40E 33		17E 40	8E 40		9E 56
SOIL M	TWP.	20N 20E 20N 20E 21N 19E 21N 20E			24 X X X X X X X X X X X X X X X X X X X	32 32 22 32 32 32 32 32 32 32 32 32 32 32 32 3	11E 19E 20E 11E	33.2.2 32.2 32.2.2 32.2.2 32.2.2 32.2.2 32.2.2 32.2.2 32.2.2 32.2.2 32.2.2 32.2.2 32.2.2 32.2				O			40E			8E 7E 5E	
SOIL	TWP.	Creek 11 20N 20E 12 20N 20E 12 21N 19E 18 21N 20E 18 21N 20E	21N 20E 21N 20E 21N 20E	24 12N 14E 23 16N 14E 13 16N 12E 13 16N 12E 25 15N 12E 25 15N 12E 25 15N 20E 17 19N 20E	28 24N 14E 3 12N 13E 29 21N 19E 34 20N 19E 22 23N 12E 15 20N 14F	24 17N 16E	6 16N 11E 4 20N 19E 20 19N 20E 13 21N 11E 16 23N 15E	22 20N 19E 12 23N 13E 2 13N 11E 1 13N 11E				O	8N 40E	2 9N 40E	23 9N 40E River	6N 17E	5 7N 8E	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	9E 10E 9E
SOIL	SEC. TWP.	Creek 11 20N 20E 12 20N 20E 12 21N 19E 18 21N 20E 18 21N 20E	21N 20E 21N 20E 21N 20E	24 12N 14E 23 16N 14E 13 16N 12E 13 16N 12E 25 15N 12E 25 15N 12E 25 15N 20E 17 19N 20E	28 24N 14E 3 12N 13E 29 21N 19E 34 20N 19E 22 23N 12E 15 20N 14F	24 17N 16E	6 16N 11E 4 20N 19E 20 19N 20E 13 21N 11E 16 23N 15E	22 20N 19E 12 23N 13E 2 13N 11E 1 13N 11E				O	reek 9 8N 40E	2 9N 40E	23 9N 40E River	6N 17E	5 7N 8E	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	24 9N 9E 21 9N 10E 28 8N 9E
SOIL	SEC. TWP.	alockum Greek 20822 11 20N 20E 20823 1 20N 20E juilchuck Greek 2083 12 21N 19E 2084 18 21N 20E Stemilt Greek	2088 34 21N 20E 2086 30 21N 20E 2087PM 30 21N 20E Yakima River	21C11 24 12N 14E 21G8P 23 23N 14E 21C3P 23 16N 12E 21C3B 9 15N 12E 21C3B 9 15N 12E 20B10 17 19N 20E 20B10 17 19N 20E 21G44m 15 20N 14E	218.4P 28 24N 14E 21C10P 3 12N 13E 20811P 34 20N 19E 218.46 22 23N 12E 218.46 22 23N 12E	24 17N 16E	21C17P 6 16N 11E 20813 4 20N 19E 20814 20 19N 20E 2188P 13 21N 11E 20826a 16 23N 15E	20815 22 20N 19E 21849a 12 23N 13E 21C28P 2 13N 11E 21C27 1 13N 11E				O	reek 9 8N 40E	2 9N 40E	23 9N 40E River	6N 17E	7N 8E	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	8 N N N N N N N N N N N N N N N N N N N
SOIL	SEC. TWP.	Calockum Greek Upper 20823 11 20N 20E Squilchuck Greek 2083 12 21N 19E 2084 18 21N 20E Stemilt Greek	2088 34 21N 20E 2086 30 21N 20E 2087PM 30 21N 20E Yakima River	21C11 24 12N 14E 21G8P 23 23N 14E 21C3P 23 16N 12E 21C3B 9 15N 12E 21C3B 9 15N 12E 20B10 17 19N 20E 20B10 17 19N 20E 21G44m 15 20N 14E	218.4P 28 24N 14E 21C10P 3 12N 13E 20811P 34 20N 19E 218.46 22 23N 12E 218.46 22 23N 12E	21847a 7 23N 13E 20C1 24 17N 16E	21C17P 6 16N 11E 20813 4 20N 19E 20814 20 19N 20E 2188P 13 21N 11E 20826a 16 23N 15E	20815 22 20N 19E 21849a 12 23N 13E 21C28P 2 13N 11E 21C27 1 13N 11E				O	Asatin Creek 17C4 9 8N 40E	2 9N 40E	23 9N 40E River	21 6N 17E man River	5 7N 8E	21C22a 19 9N 8E 21C21P 25 8N 7E 22D1P 8 5N 5E	21C18a 24 9N 9E 21C2% 21 9N 10E 21C25P 28 8N 9E
SOIL	SEC. TWP.	Calockum Greek Upper 20823 11 20N 20E Squilchuck Greek 2083 12 21N 19E 2084 18 21N 20E Stemilt Greek	2088 34 21N 20E 2086 30 21N 20E 2087PM 30 21N 20E Yakima River	21C11 24 12N 14E 21G8P 23 23N 14E 21C3P 23 16N 12E 21C3B 9 15N 12E 21C3B 9 15N 12E 20B10 17 19N 20E 20B10 17 19N 20E 21G44m 15 20N 14E	218.4P 28 24N 14E 21C10P 3 12N 13E 20811P 34 20N 19E 218.46 22 23N 12E 218.46 22 23N 12E	21847a 7 23N 13E 20C1 24 17N 16E	21C17P 6 16N 11E 20813 4 20N 19E 20814 20 19N 20E 2188P 13 21N 11E 20826a 16 23N 15E	20815 22 20N 19E 21849a 12 23N 13E 21C28P 2 13N 11E 21C27 1 13N 11E					Asatin Creek 17C4 9 8N 40E	2 9N 40E	23 9N 40E River	20D1 21 6N 17E White Salman River	21C12 35 7N 8E	21C22a 19 9N 8E 21C21P 25 8N 7E 22D1P 8 5N 5E	21C18a 24 9N 9E 21C2% 21 9N 10E 21C25P 28 8N 9E
SOIL	SEC. TWP.	Calockum Greek Upper 20822 11 20N 20E 5quilchuck Greek 2083 12 21N 19E 2084 18 21N 20E Stemilt Greek	2088 34 21N 20E 2086 30 21N 20E 2087PM 30 21N 20E Yakima River	24 12N 14E 23 16N 14E 13 16N 12E 13 16N 12E 25 15N 12E 25 15N 12E 25 15N 20E 17 19N 20E	218.4P 28 24N 14E 21C10P 3 12N 13E 20811P 34 20N 19E 218.46 22 23N 12E 218.46 22 23N 12E	k 21847a 7 23N 13E 20C1 24 17N 16E	21C17P 6 16N 11E 20813 4 20N 19E 20814 20 19N 20E 2188P 13 21N 11E 20826a 16 23N 15E	20815 22 20N 19E 2184% 12 23N 13E Side) 21C28P 2 13N 11E ch Lake) 21C27 1 13N 11E				O	reek 9 8N 40E	2 9N 40E	23 9N 40E River	6N 17E	5 7N 8E	21C22a 19 9N 8E 21C21P 25 8N 7E 22D1P 8 5N 5E	24 9N 9E 21 9N 10E 28 8N 9E
SOIL	NUMBER SEC. TWP.	Calockum Greek Calockum Greek Upper 2082 11 20N 20E Calockum Greek Lawer 20823 1 20N 20E Squilchuck Greek Beehive Springs 2083 12 21N 19E Scaut-A-Vista Stemilt Greek	2088 34 21N 20E 2086 30 21N 20E 2087PM 30 21N 20E Yakima River	Ahtanum R. S. 21C11 24 12N 14E Big Boulder Greek 21897 35 23N 14E Bumping Lake New 21C36 13 16N 12E Bumping Ridge 21C38 9 15N 12E Candeckum Pass 2089 25 20N 20E Cande Greek 20810 17 19N 20E Domery Flot 21844m 15 20N 14E	Fish Lake 218.47 28 24.N 14E Grean Lake 21C.10P 3 12N 13E Grouse Camp 20811P 34 20N 19E High Greek 20812 34 20N 19E 218.46 22 23N 12E 1.DE C.10	Lemb Creek 21847a 7 23N 13E Annastash 20C1 24 17N 16E	21C17P 6 16N 11E 20813 4 20N 19E 20814 20 19N 20E 2188P 13 21N 11E 20826a 16 23N 15E	20815 22 20N 19E 21849a 12 23N 13E 21C28P 2 13N 11E 21C27 1 13N 11E	4650	0550	527.5 5590 2220	O	Asatin Creek Spruce Springs 17C4 9 8N 40E	Mill Creek Couse 17C3m 2 9N 40E Homestead 17C1 11 9N 40E	Martin Springs (Helmers SM) 17C2M 23 9N 40E Klickitat River	Satus Pass 20D1 21 6N 17E White Salman River	Cultus Creek 21C12 35 7N 8E	Blue Lake 21C22a 19 9N 8E 8ob's Troil 21C21P 25 8N 7E Calaniiy Ridge 22D1a 8 5N 5E	Council Pass 21C18a 24 9N 9E Divide Meadow 21C29a 21 9N 10E Grand Meadow 21C25P 28 8N 9E
SOIL	ELEV. NAME NUMBER SEC. TWP.	Calockum Greek Calockum Greek Upper 20823 11 20N 20E 44E 5000 43E 2970 Beehive Springs Scaut-A-Vista Stem 1150 Stem 1150 Stem 115 Greek Stem 115 Greek	Jump-Off 2088 34 21N 20E Stemit Slide 2086 30 21N 20E Upper Wheeler 2087PM 30 21N 20E Yakima River	4600 Ahtanum R. S. 21C11 24 12N 14E 1818 Boulder Greek 21B9P 35 23N 14E 2885 Bumping Lake New 21C36 13 16N 12E 4925 Bumping Ridge 21C38 9 15N 12E 4920 Caclockum Poss 20810 17 19N 20E 20810 Domeyy Flat 21B44m 15 200 14E	5350 Green Lake 2184P 28 24N 14E 218 24D 14E 21010P 3 12N 13E 21010P 3 12N 13E 21010P 3 12N 13E 21010P 3 12N 13E 21010P 3 12N 19E 21010P 20110P 3 12N 19E 21010P 20110P 3 12E 21010P 2 1844M 15 20N 14E 2 1844M 15 20N 14E 21010P 2 1844M 15 20N 14E 21010P 2 1844M 15 20N 14E 2 1844M 15 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	5700 Lend Creek 21847 7 23N 13E 6500 Manastash 20C1 24 17N 16E	Morse Lake 21C17P 6 16N 11E Nanum 20B13 4 20N 19E Tornic Creek 20B14 20 19N 20E Turnel Avenue 21B8P 13 21N 11E Van Epps Pass 20B26a 16 23N 15E	Waptus Lake 2084 220N 19E 2004 2004 2200 19E 21649a 12 23N 13E 2004 2005 2005 2005 2005 2005 2005 2005				LOWER COLUMBIA DRAINAG	5425 Spruce Springs 17C4 9 8N 40E	4540 3325 6800 Couse 17C3m 2 9N 40E 6810 Homestead 17C1 11 9N 40E	23 9N 40E River	3910 4900 Satus Pass 20D1 21 6N 17E White Salman River	3170 Cultus Creek 21C12 35 7N 8E 4270 4270 Lewis River	21C22a 19 9N 8E 21C21P 25 8N 7E 22D1P 8 5N 5E	4070 Council Pass 21018a 24 9N 9E 3700 Divide Meadow 21C29a 21 9N 10E 5310 Grand Meadow 21C25P 28 8N 9E
SOIL	KANGE ELEV. NAME NUMBER SEC. TWP.	Calockum Greek Upper 20822 11 20N 20E 44E 5000 43E 2970 Beekive Springs 2083 12 21N 19E 5caut-A-Vista 2084 18 21N 20E 35F 4070 Stemilt Greek	3170 Jump-Off 2088 34 21N 20E 355 Stemilt Slide 2086 30 21N 20E 2150 Upper Wheeler 2087PM 30 21N 20E 2720 Yakima River	35E 4000 Ahtanum R. S. 21C11 24 12N 14E 42E 3215 Bounding Loke New 21G3P 33 16N 12E 38E 28B5 Bumping Loke New 21C36 13 16N 12E 41E 4925 Bumping Ridge 21C38 9 15N 12E 38E 4990 Cadockum Pass 20B9 25 20N 20E 38E 3370 Cadec Greek 20B10 17 19N 20E 20mery Flat 21B44m 15 20N 14E	35E 5350 Green Lake 2184P 28 24N 14E Grouse Comp 20811P 3 12N 13E 23E 7000 High Creek 20812 34 20N 19E 24E 6550 Lake Cle Flum 21814M 15 20N 14F	246 5700 Lembh Creek 21847 7 23N 13E 246 6000 Manastash 20C1 24 17N 16E	4300 Morse Lake 21C17P 6 16N 11E 4500 Namum 20813 4 20N 19E 6750 Turnel Avenue 2188P 13 21N 11E 2845 Van Epps Pass 20826o 16 23N 15E	Worlers Flot 2081 9E 200 19E Worlers Flot 2084 9E 200 19E 200 19E 200 200 10E 200	23E	15E 16E	16E 16E	4500 3730 4780 6300 6300	18E 5425 Spruce Springs 17C4 9 8N 40E	17E	3540 Martin Springs (Helmers SM) 17C2M 23 9N 40E 3540 6725 Klickitat River	175 3910 18E 4900 Satus Pass 20D1 21 6N 17E 18E 4900 White Salman River	15E 3170 Cultus Creek 21C12 35 7N 8E 17E 2240 Lewis River	1810 1970 Blue Lake 21C22a 19 9N 8E 1127 Bob's Trail 21C21P 25 8N 7E 21C3 Colomistry Ridge 22D1a 8 5N 5E	13E 4070 Council Pass 21C18a 24 9N 9E 19E 3700 Divide Meadow 21C29a 21 9N 10E 20E 5310 Grand Meadow 21C25P 28 8N 9E 28 8N
ASHINGTON SNOW COURSES, SOIL	KANGE ELEV. NAME NUMBER SEC. TWP.	Calockum Greek Upper 20822 11 20N 20E 44E 5000 43E 2970 Beekive Springs 2083 12 21N 19E 5caut-A-Vista 2084 18 21N 20E 35F 4070 Stemilt Greek	36E 3170 Jump-Off 2008 34 21N 20E 35E 355 Stemilt Slide 2008 30 21N 20E 36E 2120 Upper Wheeler 20077M 30 21N 20E 36E 2720 Yakina River	37N 35E 4600 Ahtanum R. S. 21C11 24 12N 14E 36N 42E 3215 Bumping Loke New 21C36 13 16N 12E 32N 38E 2885 Bumping Loke New 21C36 13 16N 12E 32N 41E 4925 Bumping Ridge 21C38 9 15N 12E 31N 38E 4990 Cadockum Psss 2089 25 20N 20E 29N 38E 3370 Cadeckum Psss 20810 17 19N 20E 29N 38E 35Duney Flat 21844m 15 20N 14E	36N 35E 5350 Green Lake 2184P 28 24N 14E Crouse Gamp 20811P 3 12N 13E Crouse Gamp 20811P 34 20N 19E High Greek 2018 34 20N 19E 26N 24E 6750 Jahr Cle Flum 21814M 15 20N 14F	30 37N 24E 5700 Lembh Creek 21847a 5 201 31E	33 37N 246 4500 Norse Lake 21C17P 6 16N 11E Norse Lake 20813 4 20N 19E 15 35N 246 4500 Trail Greek 20813 4 20N 19E 15 35N 236 6750 Tunel Avenue 2188P 13 21N 11E 30 39N 25E 2845 Van Epps Pass 20826a 16 23N 15E	Waghrs Flant 2081 2 20N 19F	36 34N 23E	80sin 12 31N 15E 3 31N 16E	31N 16E 31N 16E 34N 16E	16E 4400 17E 9730 17E 4780 20E 6300 20E 6300	34 33N 18E 6500 Asatin Creek 19 28N 18E 5425 Spruce Springs 17C4 9 8N 40E 34 28N 19F 1600	28 31N 17E 4540 2 29N 17E 3325 15 28N 19E 6800 17 30N 19E 6400 17 30N 19E 6400 17 30N 19E 6400	22 29N 18E 3540 Martin Springs (Helmers SM) 17C2M 23 9N 40E 22 29N 18E 3540 KItckitat River	20 291 175 9200 10 28N 18E 4900 Active Fass 20D1 21 6N 17E Nover Nover 18E 4900 Active Fair Nover 18E 4900 Active Fair Nover 18E	7 26N 15E 3170 Cultus Creek 21C12 35 7N 8E 13 2N 17E 4270 Lewis River	4 25N 17E 1810 33 27N 17E 1970 1 24N 17E 1127 Bob's Trail 21C21P 25 8N 7E 4 26N 16E 21Q Calomity Ridge 22D10 8 5N 5E	14 26N 13E 4070 Council Pass 21C18a 24 9N 9E 12 26N 19E 3700 Divide Meadow 21C29a 21 9N 10E 10 20N 20E 5310 Grand Meadow 21C25P 28 8N 9E
WASHINGTON SNOW COURSES, SOIL	KANGE ELEV. NAME NUMBER SEC. TWP.	Calockum Greek Upper 20822 11 20N 20E 44E 5000 43E 2970 Beekive Springs 2083 12 21N 19E 5caut-A-Vista 2084 18 21N 20E 35F 4070 Stemilt Greek	26 38N 36E 3170 Jump-Off 2088 34 21N 20E 26 39N 35E 3595 Jemilt Side 2086 30 21N 20E 3 38N 36E 220 Upper Wheeler 2087PM 30 21N 20E 2 38N 36E 2720	ZO 39N 35E 4600 Ahranum R. S. 21C11 24 12N 14E River 19 36N 42E 21S 8umping Loke New 21C36 13 16N 12E 34 32N 38E 2885 8umping Loke New 21C36 13 16N 12E 11 32N 41E 4925 8umping Ridge 21C38 9 15N 12E 2 31N 38E 4990 Calcokum Pass 2089 25 20N 20E 6 29N 38E 3370 Cacke Creek 20810 17 19N 20E River 200 200 20E 20N 14E 20N 14E	36N 35E 5350 Green Lake 2184P 28 24N 14E Crouse Gamp 20811P 3 12N 13E Crouse Gamp 20811P 34 20N 19E High Greek 2018 34 20N 19E 26N 24E 6750 Jahr Cle Flum 21814M 15 20N 14F	30 37N 24E 5700 Lembh Creek 21847a 5 201 31E	33 37N 246 4500 Norse Lake 21C17P 6 16N 11E Norse Lake 20813 4 20N 19E 15 35N 246 4500 Trail Greek 20813 4 20N 19E 15 35N 236 6750 Tunel Avenue 2188P 13 21N 11E 30 39N 25E 2845 Van Epps Pass 20826a 16 23N 15E	Waghrs Flant 2081 2 20N 19F	36 34N 23E	80sin 12 31N 15E 3 31N 16E	8 31N 16E 18 31N 16E 19 34N 16E	18 34N 16E 4600 3 34N 17E 3730 21 35N 12E 4780 32 31N 20E 6300 10	34 33N 18E 5300 Asatin Creek 19 28N 18E 5425 Spruce Springs 17C4 9 8N 40E 34 28N 19F 1600	28 31N 17E 4540 2 29N 17E 3325 15 28N 19E 6800 17 30N 19E 6400 17 30N 19E 6400 17 30N 19E 6400	22 29N 18E 3540 Martin Springs (Helmers SM) 17C2M 23 9N 40E 22 29N 18E 3540 KItckitat River	20 271 175 2900 Satus Pass 20D1 21 6N 17E 10 28N 18E 4900 White Salman River	7 26N 15E 3170 Cultus Creek 21C12 35 7N 8E 13 2N 17E 4270 Lewis River	4 25N 17E 1810 33 27N 17E 1970 1 24N 17E 1127 Bob's Trail 21C21P 25 8N 7E 4 26N 16E 21Q Calomity Ridge 22D10 8 5N 5E	14 26N 13E 4070 Council Pass 21C18a 24 9N 9E 12 26N 19E 3700 Divide Meadow 21C29a 21 9N 10E 10 20N 20E 5310 Grand Meadow 21C25P 28 8N 9E
WASHINGTON SNOW COURSES, SOIL	KANGE ELEV. NAME NUMBER SEC. TWP.	COLUMBIA DRAINAGE end Oreille River 17A2 7 31N 43E 5250 Golockum Greek Upper 20823 11 20N 20E 17A1P 24 37N 44E 5000 17A3 30 33N 43E 2970 Beehive Springs 2083 12 21N 19E Kettle River 5500t-A-Vista 2084 18 21N 20E 18A3 28 39N 35E 1450 Scout-A-Vista Stemilt Greek	38N 36E 3170 Jump-Off 2088 34 21N 20E 38N 36E 325 Upper Wheeler 2087PM 30 21N 20E 38N 36E 220 Upper Wheeler 708 70k in a River	20 37N 356 4600 Ahranum R. S. 21C11 24 12N 14E 8 iver 19 36N 42E 21S 8unging Boulder Greek 21G8P 35 23N 14E 34 32N 38E 2885 8unping Incke New 21C36 13 16N 12E 11 32N 41E 4925 Bumping Ridge 21C38P 9 15N 12E 26 31N 38E 4990 Calockum Pass 208P 25 20N 20E 6 29N 38E 3370 Caoke Creek 20810 17 19N 20E River 20mery Flot 21844m 15 20N 14E	San San San San Fish lake 2184P 28 24N 14E San San	19A1 30 37N 24E 5700 Lembh Creek 21847a 7 23N 13E 200.000 200.000 30 37N 13E 5000 Monastash 20C1 24 17N 16E	35N 246 4500 Morse Lake 21C17P 6 16N 11E 37N 24E 4500 Infili Creek 20813 4 20N 19E 35N 23E 6750 Iumel Avenue 2188P 13 21N 11E 39N 25E 2845 Von Epps Pass 20826o 16 23N 15E	38N 20E 6400 Webles Flot 20815 22 20N 19E 38N 20E 6500 White Pass (East Side) 21C28P 2 13N 11E 40N 235 700 White Pass (Leach Lake) 21C27 1 13N 11E	36 34N 23E	80sin 12 31N 15E 3 31N 16E	8 31N 16E 18 31N 16E 19 34N 16E	34N 166 4600 34N 17F 4780 31N 206 6300 31N 206 6300	ver Asatin Creek 19 28N 18E 5425 Spruce Springs 17C4 9 8N 40E 34 28N 19F 1600	28 31N 17E 4540 2 29N 17E 3325 15 28N 19E 6800 17 30N 19E 6400 17 30N 19E 6400 17 30N 19E 6400	208209 2 29N 18E 5340 Martin Springs (Helmers SM) 17C2M 23 9N 40E 20824SP 22 29N 18E 5725 Klickitat River	200,355 20 201 175 9200 206,213 10 28N 18E 4900 atchee River 200 Satus Pass 20D 21 6N 17E	21823 7 26N 15E 3170 Cultus Creek 21C12 35 7N 8E 218415P 13 28N 17E 3240 Lewis River	20816 4 25N 17E 1810 2085 33 27N 17E 1970 Blue Lake 21C22a 19 9N 8E 20817 1 24N 17E 1127 Bob's Trail 21C21P 25 8N 7E 20818 4 26N 16E 2140 Calamity Ridge 2201a 8 5N 5E	2181P
WASHINGTON SNOW COURSES, SOIL	KANGE ELEV. NAME NUMBER SEC. TWP.	Pend Oreille River Calockum Creek Upper 20822 1 20N 20E 17A2	1848 5 38N 36E 3170 Jump-Off 2088 34 21N 20E 1844 26 39N 35E 3595 Opper Wheeler 2087PM 30 21N 20E 1845 5 38N 36E 2720 Opper Wheeler 2087PM 30 21N 20E 1846 5 38N 36E 2720	BAJ 20 35N 35E 4600 Ahtanum R. S. 21C11 24 12N 14E 14 12N 14E 14 12N 14E 14 12N 14E 14 14 15 14	San San San San Fish lake 2184P 28 24N 14E San San	19A1 30 37N 24E 5700 Lembh Creek 21847a 7 23N 13E 200.000 200.000 30 37N 13E 5000 Monastash 20C1 24 17N 16E	19A.2P	Methaw River	19A7 36 34N 23E	Chelan Lake Basin 20A22a 12 31N 15E 20A25a 3 31N 16E	20A24a 8 31N 16E 20A23a 18 31N 16E 20A13a 19 34N 16E	20A12A 18 34N 16E 4600 20A18A 21 35N 17E 3730 20A30A 32 31N 20E 6300 20A30A 32 31N 20E 6300	2043/a 34 38N 18E 5200 Entiat River 20828a 19 28N 18E 5425 20818 34 28N 19F 1450	20A33a 28 31N 17E 4540 Mill Creek 20A34a 2 29N 17E 3325 20B37a 15 28N 19E 6800 Couse 17C3m 2 9N 40E 20B37a 17 30N 19E 4500 Homestead 17C1 11 9N 40E	208209 2 29N 18E 5340 Martin Springs (Helmers SM) 17C2M 23 9N 40E 20824SP 22 29N 18E 5725 Klickitat River	200,355 20 201 175 9200 206,213 10 28N 18E 4900 atchee River 200 Satus Pass 20D 21 6N 17E	21823 7 26N 15E 3170 Cultus Creek 21C12 35 7N 8E 218415P 13 28N 17E 3240 Lewis River	20816 4 25N 17E 1810 2085 33 27N 17E 1970 Blue Lake 21C22a 19 9N 8E 20817 1 24N 17E 1127 Bob's Trail 21C21P 25 8N 7E 20818 4 26N 16E 2140 Calamity Ridge 2201a 8 5N 5E	2181P
INDEX to WASHINGTON SNOW COURSES, SOIL	KANGE ELEV. NAME NUMBER SEC. TWP.	Pend Oreille River Calockum Creek Upper 20822 1 20N 20E 17A2	26 38N 36E 3170 Jump-Off 2088 34 21N 20E 26 39N 35E 3595 Jemilt Side 2086 30 21N 20E 3 38N 36E 220 Upper Wheeler 2087PM 30 21N 20E 2 38N 36E 2720	BAJ 20 35N 35E 4600 Ahtanum R. S. 21C11 24 12N 14E 14 12N 14E 14 12N 14E 14 12N 14E 14 14 15 14	San San San San Fish lake 2184P 28 24N 14E San San	reek No. 2 19A4 19 37N 24E 5700 Lemch Creek 2 19A4 7 23N 3E 6000 Manastash 20C1 24 17N 16E	33 37N 246 4500 Norse Lake 21C17P 6 16N 11E Norse Lake 20813 4 20N 19E 15 35N 246 4500 Trail Greek 20813 4 20N 19E 15 35N 236 6750 Tunel Avenue 2188P 13 21N 11E 30 39N 25E 2845 Van Epps Pass 20826a 16 23N 15E	Waghrs Flant 2081 2 20N 19F	19A7 36 34N 23E	80sin 12 31N 15E 3 31N 16E	20A24a 8 31N 16E 20A23a 18 31N 16E 20A13a 19 34N 16E	20A12A 18 34N 16E 4600 20A18A 21 35N 17E 3730 20A30A 32 31N 20E 6300 20A30A 32 31N 20E 6300	2043/a 34 38N 18E 5200 Entiat River 20828a 19 28N 18E 5425 20818 34 28N 19F 1450	28 31N 17E 4540 2 29N 17E 3325 15 28N 19E 6800 17 30N 19E 6400 17 30N 19E 6400 17 30N 19E 6400	20820P 22 29N 18E 3540 Martin Springs (Helmers SM) 17C2M 23 9N 40E 550w Pillow 20824SP 22 29N 18E 3540 E 50w Pillow 20824SP 34 30N 18E 6725	200,355 20 201 175 9200 206,213 10 28N 18E 4900 atchee River 200 Satus Pass 20D 21 6N 17E	21823 7 26N 15E 3170 Cultus Creek 21C12 35 7N 8E 74w) 218418P 13 26N 14E 3240 Lewis River	20816 4 25N 17E 1810 2085 33 27N 17E 1970 Blue Lake 21C22a 19 9N 8E 20817 1 24N 17E 1127 Bob's Trail 21C21P 25 8N 7E 20818 4 26N 16E 2140 Calamity Ridge 2201a 8 5N 5E	14 26N 13E 4070 Council Pass 21C18a 24 9N 9E 12 26N 19E 3700 Divide Meadow 21C29a 21 9N 10E 10 20N 20E 5310 Grand Meadow 21C25P 28 8N 9E



GES
GAGES
Ö
ш
Ø.
% %
7
N STORAGE
6
PRECIPITATIO
7
Ы
EC
PR
0
۵
2
0
Ĕ
¥_
E ST
RE
1
×
S, SOIL MOISTURE
0
٠,`
SES
JRS
5
Ŭ
≯
0
S
Z
0
G
Z
SH
VASHINGTON SNOW COURS
>
0
X
NDEX
4

ELEV.	2200 3680 6000 5900 3500 3500 4200	4900 3800 5200 5400 800 3800 2100 2200 1600 1600		4400 3700 4300 4300	5200			5200	4500	4500	4200 4700 3000 5200	3900	3300		e 88 9
RANGE	126 146 146 146 146	26 26 26 26 26 26 26 26 26 26 26 26 26 2		7E 8E 7E 9E	36			5W	%9	}	5W 5W 5W	}	86	e Station	Storas
TWP.	28 6 4 8 8 4 4 8 8 4 4 8 8 4 8 8 8 9 8 8 9 8 8 9 8 8 9 8 9	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX		X 3 3 4 6 6 8 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8		JLA		28N	29 N	29N	24N 24N 23N 25N	24N	Z8Z	lal Marke	Gage
R SEC.	River 35 (AZ8a 26 (AZ8a 26 AZ8a 26 AZ8a 26 AZ8a 26 AZ8a 26 AZ8a 26 AZ8a 27 AZ8	77 177 177 177 177 177 177 177 177 177		21A19a 7 21A20A 20 21A23 9-10 21A26 17	51 pl	PENINSULA	River	-	eek 4 31	36 River	28 17		7	Daly Only Only And Aeris And Soil	Storage Storage
NUMBER	0000000000	21A270 21A71A 21A7A 21A6A 21A17 21A18 21A13A 21A13A 21A13A 21A13A 21A13A 21A13A	sack	21A2 21A2 21A2 21A2	218		eness Riv	2384	Morse Creek 23814 3 Elwha River	23B3 36 omish Rive	2387 2386 23810 2385	23B8 e d u c k	2381	Course Course Course	Course
	Skagi		Z	X		OLYMPIC	Dung		M _o	Skok	S	Sole		Snow C Aerial I Snow C Snow C	Snow Cour Precipitat P Snow Pills
	t Trail eek Trai eadaws () sk bins een Lake	n eadaw er Creek k		in ke ke in		0					hite hite Lakes Home	S		21 A 7 a 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3 A 3	21 A7P 21 A7P 21 A7S
	Beaver Creek Trail Beaver Pass Brown Tap Devils Park Freezeaut Creek Trail Granite Creek Meadows Cabins New Hazamen Lake Thunder Basin	Boker Pass Bock Butte Easy Pass Jasper Pass Kamo Kulskan Marten Lake Manni Blum Schei Fass Keedaw Schreibers Meedaw Schreibers Meedaw Schreibers Meedaw Schreibers Meedaw Schreibers Meedaw Schreibers Meedaw Without Greek Wille Creek Wichson Lake		Bald Mountain Canyan Glacier Creek Panarama New	Lakes			Deer Park	Cax Valley	Hurricane	Black and White Black and White L Four Stream Hame Sweet Home	awn Pas	Deer Lake		
NAME	Beav Beav Brown Devi Freez Freez Gran Meac Thun	Bake Dock Easy Mart Mart Rock Schra Schra Schra Schra		Sald Glac Pana	N N			Deer	Š	Нот	Blac Blac Four Ham	Sund	Deer		
ELEV.	3800 3200 2000 3100 4400 3400 4250 3000	5300 4100 2200 2870 5900 4500 3250			4550 2760 5500 5050		9009		1800 1200 3200 2900 2100	4000 4700 5000	4100	3300 5200 5200 500 500 500 500 500	3000 3400 3400	3500 3625 1900	2900
RANGE	26 26 26 26 26 26 26 26 26 26 26 26 26 2	10E 10E 10E 8E		***	8888		11E		38 98 88 88	38 = 1 = 5	111	900	106	9E 11E 9E	10E
. TWP.	SYZZZZZZZZZ SZZZZZZZZZZZZZZZZZZZZZZZZZZ	ZZZZZZZZ		SOUND DRAINAGE	15N 15N 15N		18N		20222 20222 20222			ZZZZ	-	22N 22N 26N	26N
R SEC.	21C26P 8 22C56 24 22C6P 36 21D19P 22 21D19P 22 22C10 35 21C200P 16 21C200P 14 21C200P 14 21C200P 14 21C200P 14 21C200P 14 21C200P 14 21C200P 14	33 28 15 15 15 15 15 15 15 15 15 15 15 15 15		DRAI	4P 23 3 29 35 13 1 13	River	13 30	River	21824P 18 21825 27 21842SP 21 21827 14 21828 12	27 36 50 22 31 5 43SPp14	830 18 River	22 33 22 33 24 34 34 34 34 34 34 34 34 34 34 34 34 34		48 31 2P 19 18 26	33
NUMBER	22058 2058			T SOUND DRAII	21C4P 21C3 21C35 21C15	White R	21		218 218 218 218 218 218	2222 2222 2388 2388 2388 2388 2388 2388	218; dar R 218,	21821P 21822 21816 21816	21817 2186 21820 21820	2182P 2182P 21818	21819
	 			⊢ Z		W		Gre	70		Ö		Snogu	د د د	2
	Le lter natain River Raad adaw es ain sk	ke ke		PUG	k (New)				ek ntain ain No.	age	2	r Aux.	ek	daw dows olt	£
	Lone Pine Shelter Marble Mauntain New Muddy River Oldman Pass Plains of Abraham Smith Creek Raad Spencer Meadaw Surprise Lakes I Table Mauntain	Cayuse Pass Mosquita Meadows Ohanape cosh Pergaril Peak Pojatal Peak Pojato Hill			Ghost Farest Langmire Paradise Park (New) Stem Glade		Corral Pass		Airstrip Charley Creek Cougar Mountain Grass Mountain N Grass Mountain N	Lester Creek Lynn Lake Sawmill Ridge Snawshoe Butte	G d d	Gardner Aux.	Rex River Sauth Fark Cedar Tinkham Creek	Alpine Meadaw Olallie Meadows Sauth Fark Tolt	Elizabeth
NAME	Mark Nark New Smith Spen Tabk	Mosq Mosq Mosq Obar Pigta Ville			Ghost Langmi Paradis Stem G		Col		Airst Coug Grass	Lynn Lynn Sawr Snav	T Y	* * * * * * * * * * * * * * * * * * *	Rex Saut Tink	Alpii Olal Sautl	Lake
ELEY.	5300 4300 4400 3400 5000 4450	3100 3200 3450 3400 4600 4123 2200 3371 6000 5385 2930	3327 3935 3935	5400 3875 3360 2450 5925	3360 3024 4500 4500					9200	3370 4030 4400	4030	4000	4800 2200 2500 4200	3500
RANGE	20E 20E 19E 20E 20E 20E 20E	200	14E 13E 16E	116 196 206 116 156	13E 11E				G E	40E	40E 40E	17F	9E	8E 7E 5E	10E 9E
TWP.	20N 20N 20N 21N 21N 21N 21N 21N 21N 21N 21N 21N 21	22222222222222222222222222222222222222							4 Z 4	8 Z	ZZZ	_	River 35 7N	2 % 2 % X	2 % Z Z
SEC.	Creek 11 11 12 12 13 13 13 13 13 13 13 13 13 13	24 13 2 2 3 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3							IA DR	Creek	k 112	Rive		iver 19 25 8 8	
NUMBER	Colackum Greek er 2082 11 Squilchuck Greek 2083 12 2084 18 Stemilt Greek 2086 34 2086 30	7 dK ind K i	21814N 21847a 20C1	21C17P 20B13 20B14 21B8P 20B26a	20815 2184% 21C28P 21C27				LUMB	Asatin Creek 17C4 9	Mill Creek 17C3m 17C1 17C1 17C1	Klickitot Rive	White Salman 21C12	Lewis Riv 21C22a 21C21P 22D1a 21C18a	21C2% 21C25P
	Col pper wer Squi								LOWER COLUMBIA DRAIN.	∢	M 111 Creek Cause 17C3m Homestead 17C1 Martin Sprinos (Helmers SM) 17C2M	<u> =</u>	White	<u>ن</u>	
	ings ings sta	S. C. Creek ce New ca New digge diss	5 .∡	Jue Iss	East Sic (Leach I				LOWB	Š	igs (Hel	,)	V	e de	daw
	Colockum Creek Upper Calackum Creek Lower Scalerive Springs Scaut-A-Vista Jump-Off Stemilt Slide Upper Wheeler	Ahtanum R. S. Big Boulder Greek Bumping Lake Bumping Lake Bumping Ridge New Bumping Ridge Calackum Pass Cadea Greek Damery Flat Free Lake Green Lake Grouse Camp High Creek Joe Lake	Lake Cle Elu Lemah Creek Manastash	Marse Lake Nanum Trail Creek Tunnel Avenue Von Epps Pass	Walters Flat Waptus Lake White Pass (East Side) White Pass (Leach Lake)		.1			Spruce Springs	se estead iin Sprir	Satus Pass	Cultus Creek	Blue Lake Bab's Trail Calamity Ridge Council Pass	de Meac
N AME	Sca Ster	Ahte Big Bum Bum Bum Bum Bum Calc Calc Calc Calc Calc Calc Calc Calc	Lek Mar	Na India	× × × × × × × × × × × × × × × × × × ×					Spru	Caus Hom Mari	Safu		Blue Bab' Cala	Divi
ELEV.															00
	5250 5000 2970 1450 4070 3170 3170 2150		5700 6000 4300	4000 4500 6750 2845	6400 7000 6500 7000	4650	3540	5275	2220 4600 3730 4780	6500	4540 3325 6800 6510	3540 6725 6200	3170 3240	1810 1970 1970 1127 2140 4070	370
RANGE	4 43 4 44 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	35E 4000 35E 4000 38E 2885 41E 4926 38E 4990 38E 4990 38E 5350 35E 5350		24E 4500 24E 4500 23E 6750 25E 2845	20E 6400 20E 7000 18E 6500 23E 7000				16E 2220 16E 4600 17E 3730 17E 4780		17E 4540 17E 3325 17E 3325 19E 6800 18E 6510			176 4270 176 1810 176 1970 176 1127 166 2140 136 4070	
TWP.	A IN A G E 33 N 44E 33 N 44E 33 N 36E 38 N 36E 3	350 350 450 500 500 500 500 500 500 500 500 5	37N 24E 37N 24E	35N 24E 37N 24E 35N 24E 35N 23E 39N 25E	38N 20E 39N 20E 37N 18E 40N 23E	34N 23E	31N 15E	31N 16E	34N 16E 34N 16E 34N 17E 35N 17E	18E	29 N N 176 29 N N 176 30 N 196 30 N 196 30 N 196	29N 18E	28N 18E 26N 15E 26N 15E		19E 20E
SEC. TWP.	PRAINAGE River 7 31N 43E 724 37N 44E 30 33N 43E 28 39N 36E 26 39N 35E 26 39N	350 350 450 500 500 500 500 500 500 500 500 5	30 37N 24E 19 37N 24E	35N 24E 35N 24E 35N 23E 35N 23E	38N 39N 37N 40N 23E	36 34N 23E	12 31N 15E	8 31N 16E	19 34N 16E 23 34N 17E 23 35N 17E 35N 17E 35N 17E 35N 17E 35N 17E 35N 17E 37N 1	33N 18E	24 20N 28 31N 17E 2 29N 17E 15 28N 19E 17 30N 18E	22 29N 18E 34 30N 18E 20 29N 19E	River 7 26N 15E 7 26N 15E	35 22N 17E 4 25N 17E 1 24N 17E 4 26N 16E 14 26N 13E	12 26N 19E 10 20N 20E
TWP.	PRAINAGE River 7 31N 43E 724 37N 44E 30 33N 43E 28 39N 36E 26 39N 35E 26 39N	350 350 450 500 500 500 500 500 500 500 500 5	30 37N 24E 19 37N 24E	35N 24E 35N 24E 35N 23E 35N 23E	38N 39N 37N 40N 23E	36 34N 23E	12 31N 15E	8 31N 16E	34N 16E 34N 16E 34N 17E 35N 17E	33N 18E	29 N N 176 29 N N 176 30 N 196 30 N 196 30 N 196	22 29N 18E 34 30N 18E 20 29N 19E	205330 10 28N 18E article River 21823 7 26N 15E 21841SP 13 26N 14E	2082P 35 22N 175 20816 4 25N 176 2085 33 27N 176 20817 1 24N 176 20818 4 26N 136 2181P 14 26N 136	12 26N 19E 10 20N 20E
SEC. TWP.	COLUMBIA DRAINAGE end Oreille River 17A2 7 31N 43E 17A1 24 37N 44E 17A3 30 33N 45E Rettle River 18A2 36 39N 36E 18A4 26 39N 35E 18A5 3 38N 35E 18A6 36 39N 35E	Calville River 390 356 420 600 1984 9 360 1884 9 315 1884 11 320 416 492 1885 1784 11 320 416 492 1884 11 320 416 492 1884 11 320 416 492 1884 19 360 1988 370 000000000000000000000000000000000	19A1 30 37N 24E 19A4 19 37N 24E	35N 24E 35N 24E 35N 23E 35N 23E	iver 10 38N 20E 8 39N 20E 7 37N 18E 15 40N 23E	36 34N 23E	12 31N 15E	20A24a 8 31N 16E	20A13a 19 34N 16E 20A12A 18 34N 16E 20A16a 3 34N 17E 20A9P 21 35N 17E 20A9P 21 35N 17E	34 33N 18E	20817 34 2011 176 20834 2 2911 176 20837 15 281 196 20837 15 381 196 20837 2011 186	208245P 22 27N 13C 208245P 22 29N 18E 20A32a 34 30N 18E 20A37 20 29N 19E	205330 10 28N 18E article River 21823 7 26N 15E 21841SP 13 26N 14E	2082P 35 22N 175 20816 4 25N 176 2085 33 27N 176 20817 1 24N 176 20818 4 26N 136 2181P 14 26N 136	21845 12 26N 19E 20825SP 10 20N 20E
SEC. TWP.	COLUMBIA DRAINAGE end Oreille River 17A2 7 31N 43E 17A1 24 37N 44E 17A3 30 33N 45E Rettle River 18A2 36 39N 36E 18A4 26 39N 35E 18A5 3 38N 35E 18A6 36 39N 35E	Calville River 390 356 420 600 1984 9 360 1884 9 315 1884 11 320 416 492 1885 1784 11 320 416 492 1884 11 320 416 492 1884 11 320 416 492 1884 19 360 1988 370 000000000000000000000000000000000	19A4 19 37N 24E	lows 19A2PM 33 37N 24E 19A2PM 33 37N 24E 19A10a 15 35N 23E 19A6 30 39N 25E	Methaw River 20A10a 10 38N 20E 20A29a 8 39N 20E 20A5AP 7 37N 18E 19A5a 15 40N 23E	19A7 36 34N 23E	20A22a 12 31N 15E	20A24a 8 31N 16E	20A13a 19 34N 16E 20A12A 18 34N 16E 20A16a 3 34N 17E 20A9P 21 35N 17E 20A9P 21 35N 17E	20431a 34 33N 18E Entiat River 20028a 19 28N 18E	20817 34 2011 176 20834 2 2911 176 20837 15 281 196 20837 15 381 196 20837 2011 186	208245P 22 27N 13C 208245P 22 29N 18E 20A32a 34 30N 18E 20A37 20 29N 19E	205330 10 28N 18E article River 21823 7 26N 15E 21841SP 13 26N 14E	2082P 35 22N 175 20816 4 25N 176 2085 33 27N 176 20817 1 24N 176 20818 4 26N 136 2181P 14 26N 136	21845 12 26N 19E 20825SP 10 20N 20E
SEC. TWP.	PRAINAGE River 7 31N 43E 724 37N 44E 30 33N 43E 28 39N 36E 26 39N 35E 26 39N	Calville River 390 356 420 600 1984 9 360 1884 9 315 1884 11 320 416 492 1885 1784 11 320 416 492 1884 11 320 416 492 1884 11 320 416 492 1884 19 360 1988 370 000000000000000000000000000000000	k No. 1 19A1 30 37N 24E k No. 2 19A4 19 37N 24E	35N 24E 35N 24E 35N 23E 35N 23E	38N 39N 37N 40N 23E	19A7 36 34N 23E	12 31N 15E	20A24a 8 31N 16E	19 34N 16E 23 34N 17E 23 35N 17E 35N 17E 35N 17E 35N 17E 35N 17E 35N 17E 37N 1	20431a 34 33N 18E Entiat River 20028a 19 28N 18E	20817 34 2011 176 20834 2 2911 176 20837 15 281 196 20837 15 381 196 20837 2011 186	22 29N 18E 34 30N 18E 20 29N 19E	2082/a 27 28N 18E natche River 21823 7 26N 15E 21841SP 13 26N 14E	2082P 35 22N 175 20816 4 25N 176 2085 33 27N 176 20817 1 24N 176 20818 4 26N 136 2181P 14 26N 136	12 26N 19E 10 20N 20E

WATER SUPPLY OUTLOOK State of Washington April 1, 1979

* The input to the watersheds of Washington and tributary * * basins during the month of March was subnormal. The result * * is that the water supply has been reduced from that which * * was reported last month, but not to the extent as was * * reported on February 1. Snow cover, as measured near the * * first of April, indicates a reduction of approximately * * 20 percent from last month's measurement. Low elevation * * snow courses are reduced even further due to the total lack * * of input during the month and in locations where it did * * occur, precipitation was in the form of rain and not snow. * * Precipitation, as measured by the National Weather Service, * * was only 50 to 60 percent of normal over the state with the * * exception of Southeastern Washington, the only drainage * * division that had above normal rainfall. Runoff was also * * subnormal over most of the state with the exception being * * the Puget Sound Drainage and along the southern portion of * * the state. The end result is a reduction in water supply * * forecasts, percentagewise, from that which was reported last *

SNOW COVER

Snow packs measured near the first of April range from a high of 6 percent above normal for the Mill Creek Drainage to a low of 77 percent below normal for the Klickitat Drainage. The storm patterns of the last week added considerable amounts of snow to the mountain watersheds but not nearly enough to overcome the deficit experienced throughout the rest of the month. The high temperatures of March depleted the snow pack at the lower elevations and decreased it quite markedly in the upper reaches. Under normal conditions, maximum snow water equivalents occur on April 1; but this year, many maximums occurred March 1. The only rosy spot is in the Blue Mountains of Northeastern Oregon and Southeastern Washington. These areas have above normal snow cover; but even in this area, it has been markedly reduced from that reported last month.

RESERVOIRS

The irrigation reservoirs are generally in pretty good shape for April 1 and with normal subsequent precipitation, should comfortably fill with the spring runoff. The five reservoirs in the Yakima Drainage Basin have water in storage 82 percent of normal. Cle Elum Reservoir is the only one that is down any appreciable amount and this is due to the lowering of the reservoir last winter for maintenance purposes. The two small reservoirs in the Okanogan Drainage have well above normal amounts of water in storage and the power reservoirs are in pretty good shape although Lake Chelan is only 19 percent full, or 71 percent of average as of April 1.

PRECIPITATION

Rainfall, as measured by the National Weather Service, was generally well below normal during March; and winter precipitation is all subnormal with only the Southeastern Drainage Division reported to have near normal amounts of winter rainfall. By drainage divisions, the Columbia above Castlegar had rainfall that was 51 percent of normal; the Pend Oreille-Spokane, 59 percent; Northeastern Washington, 67 percent; Southeastern Washington, 106 percent; Central Washington, 46 percent; the Okanogan Drainage, 29 percent; and on the West Slopes of the Cascades, the Northwestern Slope, 61 percent; and the Southwestern Slope, 53 percent.

STREAMFLOW

The main stem of the Columbia River is holding up pretty The Columbia at Birchbank had a flow 99 percent of normal and at International Boundary, 92 percent: On down the stream, the flow at Grand Coulee was 95 percent; below Rapids Dam, 95 percent; and at The Dalles, 103 percent. Other streams that had above normal outflows during the month were the Green, Skykomish, Skagit, Spokane, Yakima, Palouse, Walla Walla, and Cowlitz. Inflow to the five Yakima irrigation reservoirs was better during March than at any time in the last ten years except for 1978 and Forecasts of streamflow now range from a low of 1972. 62 percent of normal in the Cowlitz River to a high of lll percent for Mill Creek. The · Northeastern and Southeastern areas of the state, as well as the Olympic Peninsula, have the best water supply outlook. Numerical forecasts can be found following this narrative.

STREAMFLOW FORECASTS - APRIL 1979

The following summarized runoff forecasts are based principally on mountain snow-cover and on the assumption that precipitation and temperature will be near average from the present time to the end of the forecast period. Appreciable deviations from normal of temperature and/or precipitation will correspondingly modify these forecasts. These forecasts are made as a product of the cooperative efforts of the Soil Conservation Service and the National Weather Service. Streamflow figures for 1978 are preliminary and subject to revision.

		Season	al Stream:	flow in	Thousands	s of Ac	re-Feet
Basin, Stream	Forecast	%	Fore-				15-Yr
and	Runoff	15-yr.	cast				Average
Station	1979	Avg.	period	1978	1977	1976	63-77
	COLU	MBIA BAS	IN				
·							
COLUMBIA RIVER SYSTEM	39300	86	Ansa Cant	44008	21562	E 20C0	45502
Columbia River	31400	86	Apr-Sept		31562	53969	
at Birchbank $1/$		86	Apr-July	34030	23812	38930	36353
	22500	86	Apr-June	24082	18026	25889	26194
Columbia River	56700	83	Apr-Sept	66868	41056	81878	68012
at Grand Coulee 1/	47600	83	Apr-July	54559	32018	63543	57035
_	36700	83	Apr-June	41585	25623	47065	44273
Columbia River	62600	85	Apr-Sept	72892	43415	87384	73935
bl. Rock Island Dam 1/	53000	85	Apr-July	60163	34253	68404	62462
	41200	85	Apr-June	46242	27563	50696	48489
Columbia River	81600	7 9	Apr-Sept	101055	54092	120643	103493
At The Dalles, OR 1/	69700	79	Apr-July	84815	42940	97836	88519
<u></u>	56300	79	Apr-June	67353	35524	77318	71237
PEND OREILLE RIVER SYSTEM							
Pend Oreille River	12900	81	Apr-Sept	15581	4130	16946	15950
bl. Box Canyon	11900 ·	81	Apr-July	14080	2715	15271	14690
DI. Dox canyon	95.00	81	Apr-June	11,750	2261	11814	11760
KETTLE RIVER SYSTEM							
Kettle River	1500	. 81	Apr-Sept	2056	1145	2434	1846
nr. Laurier	1400	80	Apr-July	1877	1105	2112	1754
III. Daurici	1260	79	Apr-June	1686	1037	1826	1588
Colville River	130	97	Apr-Sept	138	26	123	134
at Kettle Falls	120	98	Apr-July	125	22	106	123
at hereit rulls	110	96	Apr-June	117	20	98	115
	110	50	The dance	11/	20	20	113

Observed flow corrected for storage in any of the following reservoirs which are above the station: Kootenay Lake, Hungry Horse, Flathead Lake, Pend Oreille Lake, F. D. Roosevelt Lake, Lake Chelan, Coeur d'Alene Lake, Brownlee, Noxon Reservoir and pumpage at F. D. Roosevelt Lake.

		Season	al Streamf	low in T	housands	of Acre	
Basin, Stream	Forecast	8	Fore-				15-Yr
and	Runoff	15-Yr.	cast				_
Station	1979	Avg.	Period	1978	1977	1976	63-77
SPOKANE RIVER SYSTEM							
Spokane River	2400	82	Apr-Sept	2427	-	3418	2910
at Post Falls, ID 2/	2185	80	Apr-July	2330	-	3275	2733
· —	2055	7 9	Apr-June	2199	-	3033	2600
OVANOCAN DIVID CUCMON							,
OKANOGAN RIVER SYSTEM Similkameen River	1070	71	Apr-Sept	1506	645	1944	1517
nr. Nighthawk	1000	71	Apr-July	1365	605	1720	1417
III. NIGIICIIAWA	845	71	Apr-June	1170	547	1347	1192
			-				
Okanogan River							
nr. Tonasket	1150	67	Apr-Sept	1690	708	2185	1719
	1050	67	Apr-July	1500	644	1836	1565
	875	67	Apr-June	1286	583	1382	1305
METHOW RIVER SYSTEM							
Methow River	741	72	Apr-Sept	-	280	1205_	1011
nr. Pateros	675	72	Apr-July	-	246	1047	937
	570	72	Apr-June	-	217	802	791
CHELAN RIVER SYSTEM							
Chelan River	940	76	Apr-Sept	1335	599	1466	1237
at Chelan 3/	850	79	Apr-July	1164	481	1184	1080
<u></u>	650	78	Apr-June	906	403	836	834
Stehekin River	700	77	Apr-Sept	888	494	1010	904
at Stehekin	610	80	Apr-July	750	382	787	764
ac beneath	460	80	Apr-June	563	311	523	578
	1.05						
Entiat	185	77	Apr-Sept	295	95	310	241
nr. Ardenvoir	170	78	Apr-July	268	81	266	218
	140	80	Apr-June	215	70	190	174
WENATCHEE RIVER SYSTEM							
Wenatchee River	1050	81	Apr-Sept	1311	633	1510	1297
at Plain	950	82	Apr-July	1171	542	1263	1156
	770	85	Apr-June	945	479	891	903
Wenatchee River	1360	77	Apr-Sept	1755	839	2074	1767
at Peshastin	1250	79	Apr-July	1576	730	1746	1587 /
	950	76	Apr-June	1275	753	1238	1250
Chamilt Basis	1154		W C			144+	6
Stemilt Basin nr. Wenatchee	115*		May-Sept	_	-	144*	•
Icicle Creek	290	79	Apr-Sept	-	_	-	_
nr. Leavenworth	270	79	Apr-July	_	-	_	-
	220	79	Apr-June	-	-	-	-

^{2/} Observed flow corrected for storage in Coeur d'Alene Lake and diversions by Spokane Valley Farms Company and Rathdrum Prairie Canals.

^{3/} Observed flow corrected for storage in Lake Chelan.

Basin, Stream	Forecast	8	al Streamf: Fore-				15-Yr.
and	Runoff	15-Yr.	cast				Average
Station	1979	Avg.	period	1978	1977	1976	63-77
YAKIMA RIVER SYSTEM	125	86	A Cont	100	70	157	7.45
Yakima River	115	86	Apr-Sept	106	78 67	157	145
nr. Martin $4/$	105	92	Apr-July Apr-June	92	67 67	141	133
·	103	J.	Apr-June	83	67	117	114
Yakima River	830	7 8	Apr-Sept	911	493	1091	1062
at Cle Elum 5/	760	78	Apr-July	726	416	980	970
	650	7 8	Apr-June	636	379	807	838
Walai wa Birana	1600	74	7 C	2050	000	2521	07.60
Yakima River	1460	75	Apr-Sept	2059	802	2521	2168
nr. Parker <u>6</u> /	1290	76	Apr-July	1691	657	2205	1954
	1290	70	Apr-June	1487	611	1810	1693
Kachess River	110	87	Apr-Sept	101	61	142	126
nr, Easton 7/	105	88	Apr-July	95	55	131	119
	95	91	Apr-June	88	53	109	104
Cle Elum River	400	84	Apr-Sept	411	250	561	479
nr. Roslyn 8/	370	85	Apr-July	369	215	484	435
111. 1631411 <u>0</u> /	310	87	Apr-June	314	193	370	358
		_	_				
Bumping River	110	75	Apr-Sept	117	63	175	146
nr. Nile <u>9</u> /	100	7 5	Apr-July	105	55	152	133
_	85	80	Apr-June	89	51	109	106
American River	95	7 5	Apr-Sept		50	132	127
nr. Nile	90	78	Apr-July		44	116	116
	75	79	Apr-June		39	86	95
mi de pi	190	75	No. of Compt	220	1.00	202	252
Tieton River	160	75 75	Apr-Sept	. 238	128	302	252
at Tieton Dam 10/	130	75 77	Apr-July	196	92	242	212 168
Nachar Diama	660 ·	74	Apr-June	156	76	179	890
Naches River	6.00	75	Apr-Sept	760 657	327 2 7 5	1046 908	802
nr. Naches <u>11</u> /	530	73 78	Apr-July Apr-June	564	275	717	678
			<u> </u>				
Ahtanum Creek	35	74	Apr-Sept		8	51	47
nr. Tampico <u>12</u> /	32	76	Apr-July		7	45	42
	28	76	Apr-June		6	37	37

^{4/} Observed flow corrected for storage in Lake Keechelus.

^{5/} Observed flow corrected for storage in Keechelus, Kachess, and Cle Elum Lakes and diversion by Kittitas Canal.

^{6/} Observed flow corrected for storage in Keechelus, Kachess, Cle Elum, Bumping, and Rimrock Lakes and diversions by Roza, Union Gap, New Reservation, Old Reservation, and Sunnyside Canals.

^{7/} Observed flow corrected for storage in Lake Kachess.

^{8/} Observed flow corrected for storage in Lake Cle Elum.

^{9/} Observed flow corrected for storage in Bumping Lake.

^{10/} Observed flow corrected for storage in Rimrock Lake.

Observed flow corrected for storage in Bumping and Rimrock Lakes and diversions by Tieton, Selah Valley, Wapatox Canals, and City of Yakima.

¹²/ Observed flow of North and South Forks (Combined).

			al Streamf	low in T	housands	of Acr	
Basin, Stream	Forecast	8	Fore-				15-Yr.
and	Runoff	15-Yr.	cast				Average
Station	1979	Avg.	period	1978	1977	1976	63-77
LOWER COLUMBIA RIVER SYSTEM							
Mill Creek							
at Walla Walla	19.5	111	Apr-Sept		4.5	29.	9 17.5
Lewis River	900	69	Apr-Sept	1134	1030	1285	1301
at Ariel 13/	790	70	Apr-July	946	832	1130	1131
at Affer 13/	710	. 71	Apr-June	850	763	990	995
	710	, -	npr ounc	030	703	330	7 7 7 7
Cowlitz River	1370	65	Apr-Sept		1570	2296	2125
bl. Mayfield Dam	1220	66	Apr-July		1293	1963	1853
	1040	67	Apr-June		1168	1584	1552
Cowlitz River	1710	62	Apr-Sept	2310	2157	2924	2767
at Castle Rock 14/	1520	63	Apr-July	1886	1766	2493	2401
	1300	64	Apr-June	1616	1601	2063	2028
	1300	0.	iipi ouiio	1010	1001	2005	2020
	OLYMPIC	PENINSU	LA				
DUNGENESS RIVER SYSTEM							
Dungeness River	145	91	Apr-Sept		97	160	160
nr. Sequim	115	88	Apr-July		75	128	130
	85	89	Apr-June		61	91	96
	Duca	m com					
	PUGE	T SOUND					
SKAGIT RIVER SYSTEM							
Skagit River	1520	69	Apr-Aug		1155	3003	2212
at Newhalem <u>15</u> /	1655	70	Apr-Sept		728	2943	2356
	1340	68	Apr-July		535	2322	1972
	990	67	Apr-June		429	1595	1485
ELWHA RIVER SYSTEM							
Elwha River	505	91	Apr-Sept		370	614	553
nr. Port Angeles	410	90	Apr-July		295	492	454
			1				
CEDAR RIVER SYSTEM							
Cedar River	70	75	Apr-Sept		55	91	93
nr. Cedar Falls							1
GREEN RIVER SYSTEM							
Green River							1
bl. Howard Hanson Dam <u>16</u> /	290	7 5	Mar-Sept		305	442	387

^{13/} Observed flow corrected for storage in Lake Merwin, Yale and Swift Reservoirs.

^{14/} Observed flow corrected for storage in Mayfield Reservoir.

^{15/} Observed flow corrected for storage in Diablo, Ross and Gorge Reservoirs.

^{16/} Observed flow corrected for storage in Howard Hanson Dam.

COMPARISON OF SNOW COVER WITH THAT OF PREVIOUS YEARS

The following tabulation of Washington stream basins presents the water content of the snow about April 1, 1979, as percent of the same date in 1978 and 1977 and

average of record.

average of feedra.	No. of	1979	Snow Water Expre	essed
Tributary Basin	Courses		as percent of	
	Average	1978	1977	1973-88 Avg
	UPPER COLU	UMBIA BASIN		
Pend Oreille	18	114	175	84
Kettle	15	63	101	60
Colville	4	122	191	96
Spokane	15	123	190	87
Sanpoil	1	71	143	57
Okanogan	37	69	122	64
Methow	7	37	112	34
Chelan	1	58	110	67
Entiat	9	58	176	63
Wenatchee	9	100	267	84
Yakima	15	102	240	69
Ahtanum	2	85	204	70
	LOWER	COLUMBIA		
Mill Creek	3	314	209	106
Klickitat	1	-	_	23
Cowlitz	2	95 .	201	68
	PUGET	SOUND		
White	3	92	. 186	70
Green	5	180	182 '	76
Cedar	6	270	116	48
Snoqualmie	3 .	185	167	74
Skykomish	. 3	126	172	75.
Skagit	15	140	169	68
Nooksack	5	182	124	74
	OLYMPIC I	PENINSULA		
Morse Creek	1	110	139	70
Elwha	1	147	124	65
Dungeness	i i	165	152	83
3	<u>-</u>	100	100	33

RESERVOIR STORAGE - 1000 Acre Feet

BASIN OR		USABLE 1/	***************************************	Measured April 1					
STREAM	RESERVOIR	CAPACITY	1979	1978	1977	Normal*			
		COLUMBIA	1						
Spokane	Coeur d'Alene Lake	225.1	152.1	277.8	30.3	121.6			
Columbia	Franklin D. Roosevelt Lake	5232.0	1879.4	1842.8	1673.1	1260.0			
Columbia	Banks Lake	714.9	650.7	682.9	566.1	590.8			
Okanogan	Conconully Reservoir	13.0	10.6	4.2	8.8	7.2			
Okanogan	Salmon Lake	10.5	10.5	6.2	9.3	7.5			
Chelan	Lake Chelan	676.1	131.6	156.0	205.4	184.6			
		YAKIMA							
Yakima	Keechelus Lake	157.8	101.9	158.0	91.0	108.8			
Kachess	Kachess Lake	239.0	207.9	215.9	214.4	189.8			
Cle Elum	Lake Cle Elum	436.9	128.4	315.0	431.0	292.1			
Bumping	Bumping Lake	33.7	11.5	24.4	13.6	8.6			
Tieton	Rimrock Lake	198.0	154.4	169.3	139.8	142.2			
		PUGET SOUND	_						
Skagit	Ross Reservoir	1404.1	688.3	729.5	468.1	754.4			
Skagit	Diablo Reservoir	90.6	88.4	86.8	87.1	85.7			
Skagit	Gorge Reservoir	9.8	8.0	8.3	8.3	8.0			

^{1/} Based on Active Storage

^{* 15-}Yr. Average 1963-1977

SOIL MOISTURE - APRIL

Drainage Basin			Profile	Inches	Soil	Moisture	Content
and				Total	Inche	s as of	April 1
Station	Number	Elev.	Depth	Capacity	1979	1978	1977
OKANOGAN							
Salmon Meadows	19A2M	4500	48	5.4	-	_	2.0
Trout Creek	3-M	3600	48	7.3	-	5.1	3.5
YAKIMA							
Domery Flat	21B20m	2200	48	6.9	-	-	-
Lake Cle Elum	21B14M	2200	48	12.8	-	-	-
	,						
WALLA WALLA							
Couse	17C3m	3650	48	11.1	9.5	9.0	6.9
Helmers	17C2M	4400	48	12.0	9.7	9.5	9.3
WENATCHEE							
Upper Wheeler	20B7M	4400	48	12.7	12.5	7.1	7.9

FALL SOIL MOISTURE

Drainage Basin			Profile	Inches	Soil	Moisture	Content
and				Total	(Inch	es) as c	of Oct. 1
Station	Number	Elev.	Depth	Capacity	1978	1977	1976
OKANOGAN							
Salmon Meadows	19A02M	4500	48	5.4	-	-	3.4
Trout Creek	3-M	3600	. 48	7.3	3.7	3.2	3.4
YAKIMA							
Domery Flat	21B20m	2200	48	6.9	-	-	-
Lake Cle Elum	21B14M	2200	48	12.8	-	-	· -
WALLA WALLA				*			
Couse	17C3m	3650	48	11.1	5.9	-	-
Helmers	17C2M	4400	48	12.0	8.2	-	_
WENATCHEE							
Upper Wheeler	20B7M	4400	48	12.7	10.3	6.6	_
				•			

 $\begin{array}{c} \text{PRECIPITATION } \underline{1}/\\ \\ \text{Division Average Observations and Departures} \end{array}$

	FAL	L	WINTER	
Drainage	Sept-Oct	1978 <u>2</u> /	Nov. 1978 - Mar	:. 1979 <u>2/</u>
Divisions	Observed	Departure	Observed I	eparture
Columbia in Canada	6.29	+1.27	12.00	-3.51
Pend Oreille - Spokane	2.09	-1.95	13.90	-4.36
Northeastern Washington	1.74	-0.73	7.27	-2.13
Southeastern Washington	1.22	-1.29	9.82	-0.61
Central Washington	0.60	-0.37	3.34	-1.94
North Central Washington	2.22	+0.63	3.78	-2.76
Northwest Slope Cascades	9.89	-3.32	43.16	-12.23
Southwest Slope Cascades	6.18	-2.50	26.74	-14.90
Northeastern Washington		- Lower Spokane, Kettle Drainage	Colville, Sanpoil and s.	Lower
Southeastern Washington		- Touchet, Tucann	on and Palouse Drainag	res.
Central Washington		- Yakima, Wenatch	ee and Chelan Drainage	s.
North Central Washington		- Methow and Okan	ogan Drainages.	
Northwest Slope Cascades		- Puget Sound Dra	inages.	
Southwest Slope Cascades		- Lower Columbia	Drainages.	

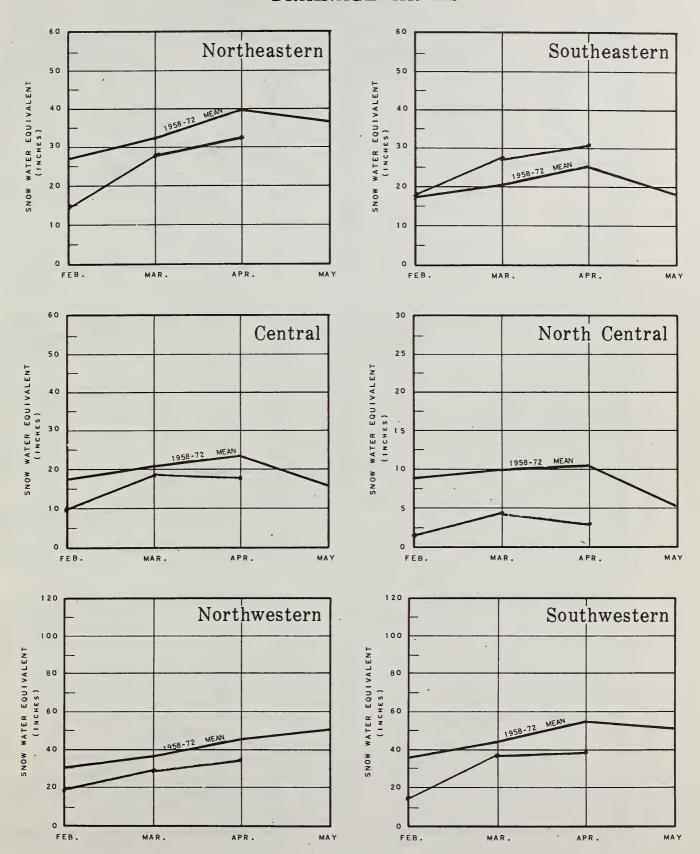
<u>1</u>/ - Preliminary analysis by National Weather Service from data furnished by Meteorlogical Services of Canada and the National Weather Service.

^{2/ -} Departure from 15-year (1958-72) drainage division average.

WASHINGTON SNOW COVER

1979

DRAINAGE AREAS

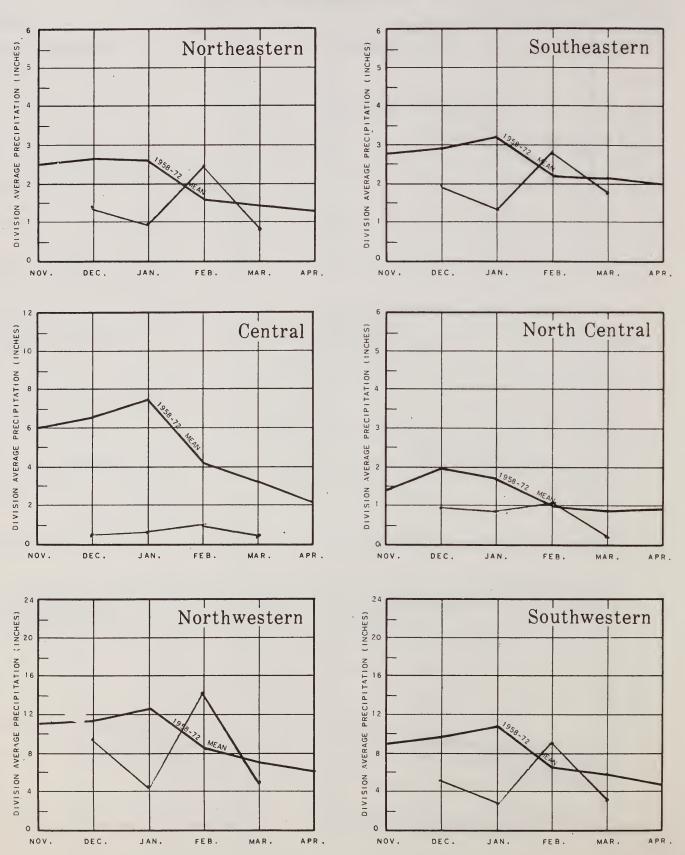


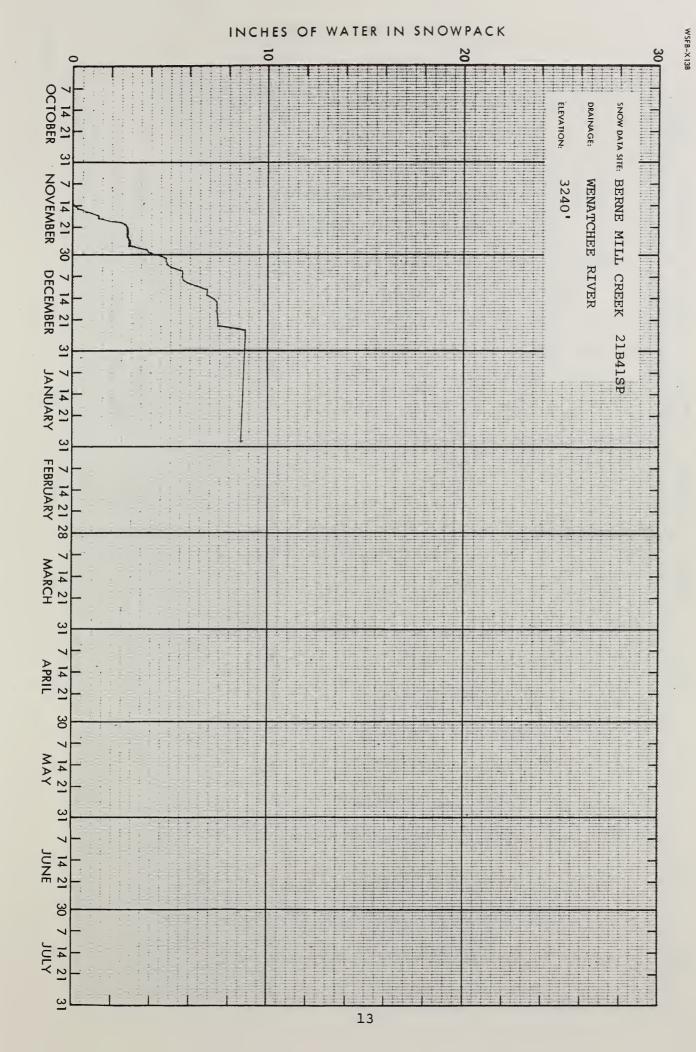
Selected Snow Survey Courses by Soil Conservation Service

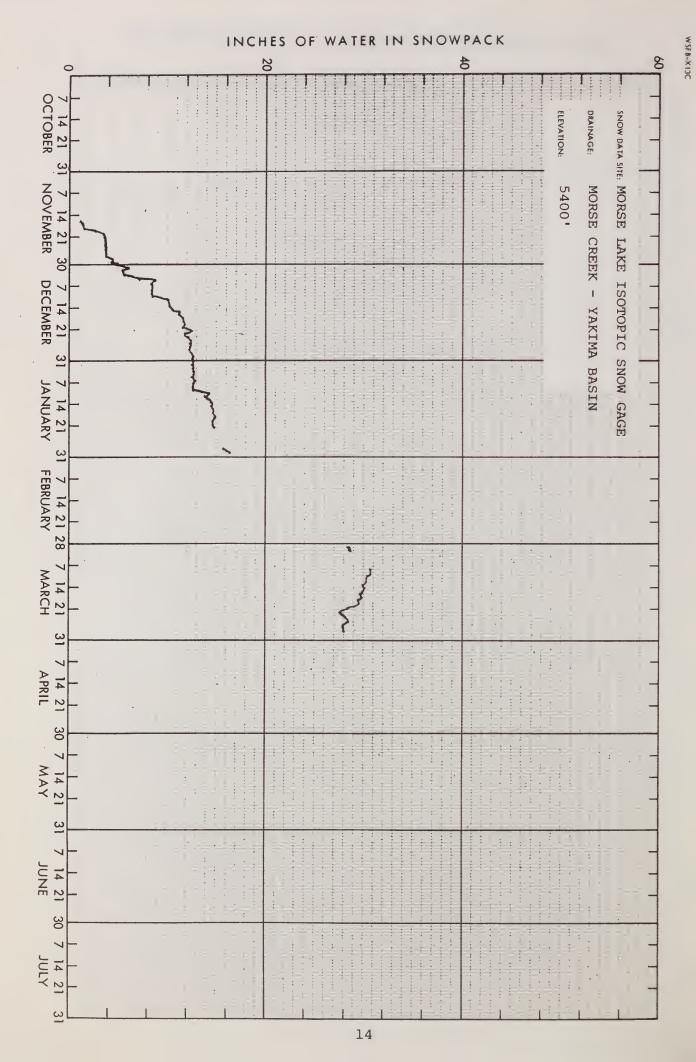
WASHINGTON VALLEY PRECIPITATION

1979

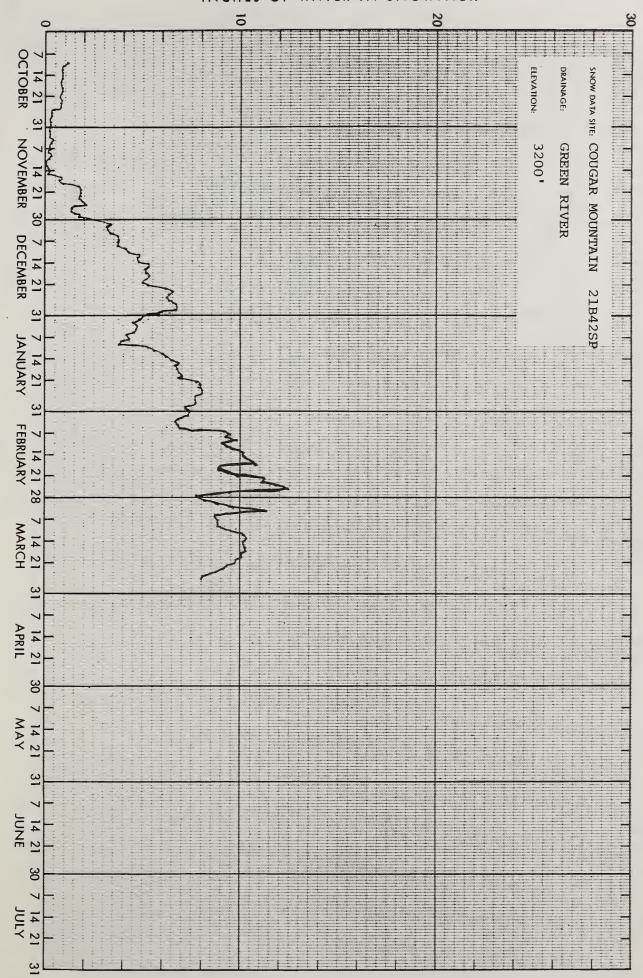
DRAINAGE AREAS

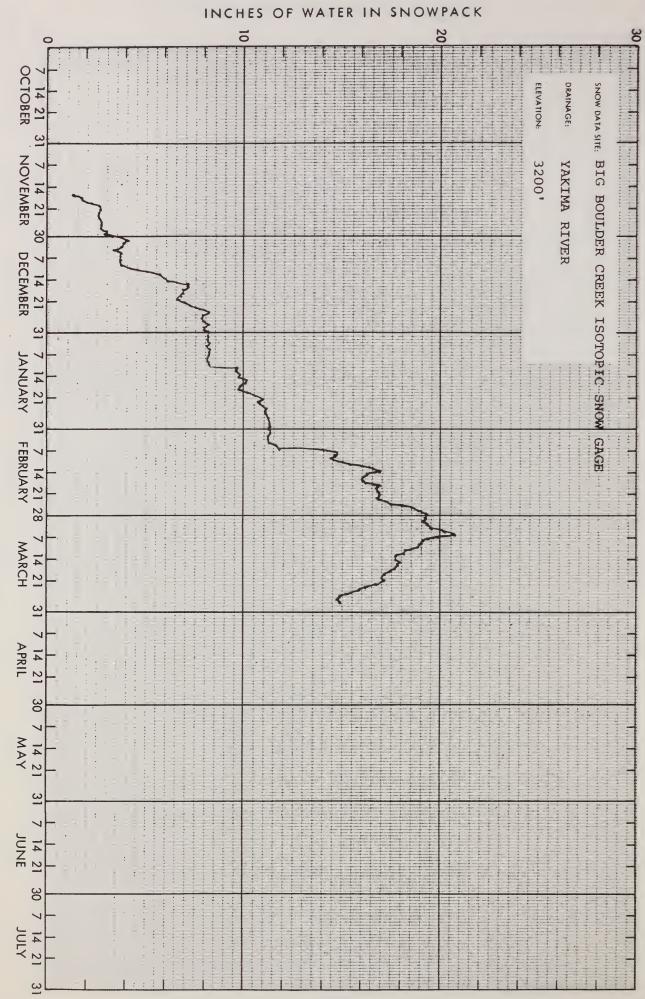






X





WONS			THIS YEAR			PAST RECORD		
	DRAINAGE BASIN and/or SNOW COURSE			Date	Snow Depth	Water Content	Water Conte	nt (inches)
	NAME	Number	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average

UPPER COLUMBIA DRAINAGE

PEND	OREI	LLE	RI	ÆR.

Baree Creek	15B11	5500	3/30	105	41.9	40.6	50.3
Baree Midway	15B16	4600	3/30	94	35.7	30.6	38.8
Baree Trail	15B15	3800	3/29	26	7.9	5.8	9.8
Benton Meadow	16A02	2344	3/28	14	5.0	1.5	5.0
Benton Spring	16A03	4900	3/28	45	16.6	16.7	20.2
Boyer Mountain	17A02	5250	3/27	55	20.4	25.6	27.2
Brush Creek Timber	14A13	5000	3/28	35	10.5	8.8	10.6
Bunchgrass Meadow	17A01	5000	3/29	58	22.6	29.1	30.7
Chewelah	17A04	4923	3/31	52	17.8	15.5	17.0
Heart Lake Trail	14C10	4800	4/3	71	25.4	18.1	23.8
Hoodoo Basin	15C10	6000	4/3	130	46.1	47.7	53.6
Hoodoo Creek	15C01	5900	4/3	128	45.1	43.5	49.9
Lookout	15B02	5250	3/14	75	28.8	33.8	38.6
			3/30	84	32.4	32.2	37.1
Mosquito Ridge	16A04A	5100	4/3	82	31.0	33.2	40.2
Nelson	19-Can	3050	3/29	41	14.2	12.2	15.7*
Schweitzer Bowl	16A06	4500	4/2	55	22.7	23.1	30.9
Schweitzer Ridge	16A05	6100	4/2	81	32.0	48.2	47.8
Smith Creek	16A01	4800	3/28	85	31.4	37.6	48.8
Winchester Creek	17A03	2970	3/27	26	7.2	9.6	11.2
KETTLE RIVER							
Barnes Creek	90-Can	5300	3/31	55	18.3	20.4	21.1*
Big White Mtn.	154∸Can	5500	3/31	54	15.9	21.0	20.9*
Bluejoint Mtn.	244-Can	7500	3/30	62	19.3	28.2	21.5*
Boulder Road	18A02	1450	3/28	0	0.0	0.0	2.4
Butte Creek	18A03	4070	3/28	23	5.7	9.5	9.5
Cabin Creek	18A08	3170	3/28	21	4.8	7.1	8.3
Carmi	126-Can	4100	3/31	16	4.0	6.7	6.7*
Farron # 1	17-Can	4000	3/27	30	8.7	12.8	13.4*
Farron # 2	243-Can	4000	3/27	31	9.0	13.5	13.5*
Goat Creek	18A04	3595	3/28	3	0.8	5.4	5.3
Graystoke Lake	5-Can	5950	3/27	52	15.9	16.2	21.5*
Monashee Pass	48A-Can	4500	3/31	40 ·	13.1	13.8	14.1*
Old Glory Mountain	42-Can	7000	3/30	53	17.2	31.7	28.9*
Snow Caps Creek	18A05	2150	3/28	0	0.0	0.0	2.2
Snow Caps Trail	18A06	2720	3/28	4	1.0	4.1	4.9
Summit G.S.	18A07	4600	3/28	16	4.7	8.0	8.5
Trapping Creek Lower	166-Can	3050	3/31	4	0.9	3.7	3.9*
	1.55		- /			0.5	100

[#] Average based on 1963-77 average

Trapping Creek Upper 165-Can 4450 3/31

29

9.3

10.2*

8.3

^{*} Average for years of record

SNOW DATA TO APRIL 1, 1979 - APPENDIX 2

SNOW			THIS YEAR	Y	PAST RECORD		
DRAINAGE BASIN and/or SI	NOW COURSE		Date	Snow Depth	Water Content	Water Conte	ent (inches)
NAME	Number	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average #
COLVILLE RIVER							
Baird	17A06	3215	3/29	19	6.5	4.1	5.6
Carlson	18A09	2885	3/31	0	0.0	0.0	2.6
Chewelah	17A04	4925	3/31	52	17.8	15.5	17.0
Stranger Mountain	17A05	4990	3/31	32	11.6	10.8	14.5
Togo	18A10	3370	3/31	34	10.9	10.2	12.9
SPOKANE RIVER							
Above Burke	15B08	6100	3/30	59	22.1	18.5	24.7
Above Roland	15B07	4350	4/4	83	32.6	26.8	35.2
Below Roland	15B06	3770	4/4	41	17.8	11.6	16.5
Copper Ridge	16B02	4800	3/28	65	26.8	16.0	29.7
Forty-nine Meadows	15B03	5000	4/1	76	24.7	19.8	32.5
Fourth of July Summit	16B03	3100	3/13	32	11.6	_	
			3/28	28	8.5	0.0	8.8
Granite Peak	15B13A	6000	4/1	122	36.5	34.4	46.8
Kellogg Peak	16B05A	5560	4/3	7 5	27.8	24.8	35.4
Lookout	15B02	5250	3/14	75	28.8	33.8	38.6
			3/30	84	32.4	32.2	37.1
Lost Lake	15B14A	6000	4/1	134	40.5	44.3	61.8
Lower Sands Creek	16B01	3400	3/28	59	19.2	16.2	21.9
Mosquito Ridge	16A04A	5110	4/3	82	31.0	33.2	40.2
Roland Summit	15B05A	5200	4/3	91	37.4	36.6	40.1
Sherwin	16C01	3200	3/30	38	14.0	6.6	13.8
Sunset	15B09A	5600	4/3	91	32.0	30.5	36.2
SANPOIL RIVER					•		
Sherman Creek Pass	· 18A01	5350	3/29	30	8.6	12.1	15.0
OKANOGAN RIVER							
Aberdeen Lake	6A-Can	4300	3/30	20	6.5	6.1	6.2*
Blackwall Mountain	100-Can	6250	4/2	72 -	24.4	30.9	35.0*
Bouleau Lake	234-Can	4580	3/25	39	11.2	15.0	15.0*
Brenda Mine	193-Can	4800	3/29	35	9.6	13.3	14.3*
Brookmere	27-Can	3200	3/30	18 .	5.5	7.6	9.7*
Carrs Landing Upper	168-Can			Late Re	eport	3.1	3.7*
Enderby	130-Can	6250	3/29	76	24.0	42.1	39.8*
Esperon Creek Lower	164-Can	4400	3/30	28	7.9	11.9	12.9*
Egnowen Crook Middle	163-Can	4700	3/30	39	11.7	15.8	16.5*
Esperon Creek Middle	105 Can	1,00	3/ 30	0.5	,		

[#] Average based on 1963-77 average

^{*} Average for years of record

NOW			THIS YEAR		PAST RECORD			
DRAINAGE BASIN and/or Si	NOW COURSE		Date	Snow Depth	Water Content	Water Content (inches)		
NAME	Number	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average #	
OKANOGAN RIVER (C	Cont.)							
Freezeout Meadows New	20A38	5000	3/29	69	28.0	24.0	41.0	
Graystoke Lake	5-Can	5950	3/27	52	15.9	16.2	21.5*	
Hamilton Hill	107-Can	4900	3/27	34	10.6	16.7	15.9*	
Harts Pass	20A05A	6500	3/30	88	31.9	47.4	48.7	
Horseshoe Basin +	19A05a	7000	4/2	48	14.4	16.3	19.4	
Isintok Lake	152-Can	5510	3/25	20	5.5	9.4	8.6	
Lost Horse Mountain	105-Can	6300	3/30	32	6.5	6.8	9.4	
Loup Loup	19A07	4650	3/29	6	1.7	9.4	9.2	
McCulloch	4-Can	4200	3/30	20	6.3	5.2	6.7*	
Missezula Mountain	106-Can	5100	3/28	23	6.3	11.8	9.1*	
Mission Creek	5A-Can	6000	3/27	48	15.8	20.8	20.4	
Monashee Pass	48A-Can	4500	3/31	40	13.1	13.8	14.1*	
Mount Kobau	156-Can	5950	3/29	20	4.1	12.4	13.7	
Muckamuck +	19A09a		4/2	32	9.6	17.0	17.9	
Mutton Creek No. 1	19A01	5700	3/28	11	3.2	14.6	14.7	
Mutton Creek No. 2SP	19A11SP	6000	3/28		2.4	16.5	13.0	
New Copper Mountain	46A-Can	4300	3/29	11	3.5	2.8	5.2	
New Penticton Res. #2	183-Can	5225	3/30	27	6.3	9.4	9.5	
Nickel Plate Mtn.	47-Can	6200	3/29	26	6.5	10.4	8.3	
Oyama Lake	203-Can	4400	3/29	20	5.4	8.0	7.8	
Paysayten +	20A28a		J,	Not Me		8.2	18.7	
Postill Lake	55-Can	4500	3/30	`29	8.3	7.9	9.2	
Quartette Lake	34-Can	4000	3/29	32	11.0	10.6	14.6	
Rusty Creek	19A03	4000	3/30	3	1.0	6.6	6.6	
Salmon Meadows	19A02	4500	3/28	10	2.9	9.0	10.1	
Silver Star Mountain	99 - Can	6050	4/1	61	19.1	32.2	28.9	
Starvation Mtn. +	19A10a		4/2	60	18.0	20.4	20.7	
Summerland Reservoir	3A-Can	4200	3/25	27	7.5	9.3	9.4	
Touts Coulee	. 19A06	2845	3/28	0	0.0	0.0	1.8	
Trout Creek	3-Can	4700	3/27	23	5.2	7.3	7.6	
Vaseux Creek	233-Can	4600	3/31	15	3.5	5.6	7.2	
White Rocks Mountain	70-Can		3/29	50	17.7	25.5	23.9	
METHOW RIVER					;			
Harts Pass	20A05A	6500	3/30	88	31.9	47.4	48.7	
Horseshoe Basin +	19A05a		4/2	48 .	14.4	16.3	19.4	
Loup Loup	19A07		3/29	6	1.7	9.4	9.2	
Mutton Creek No. 1	19A01	5700	3/28	11	3.2	14.6	14.7	
Mutton Creek No. 2 SP	19A11SP	6000	3/28	_	2.4	16.5	13.0	
Rusty Creek	19A03	4000	3/30	3	1.0	6.6	6.6	
Salmon Meadows	19A02	4500	3/28	10	2.9	9.0	10.1	

[#] Average based on 1963-77 average

^{*} Average for years of record

⁺ Snow water equivalent estimated from aerial stadia observation

SNOW			THIS YEAR	PAST RECORD			
DRAINAGE BASIN and/or SNOW	COURSE		Date	Snow Depth	Water Content	Water Conte	ent (inches)
NAME	Number	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average
CHELAN LAKE BASIN							
Cloudy Pass +	20A22a	6500		Not Me	asured	_	49.8
Greenwood Flat +	20A25a	3540		Not Me	asured	_	25.5
Little Meadows +	20A24a	5275		Not Me	asured	-	49.0
Lyman Lake	20A23A	5900		Late R	Report	59.3	65.5
Park Creek Flat +	20A13a	2220		Not Me	asured	_	26.7
Park Creek Ridge	20A12A	4600		Late R	Report	46.6	47.0
Petersons +	20 A 16a	3730			asured	_	34.8
Rainy Pass	20A09	4780	3/30	90	28.0	43.4	43.7
ENTIAT RIVER							
Blue Creek G.S.	20B28a	5425	4/1	72	27.4	45.2	43.5
Brief	20B19	1600	3/27	0	0.0	3.7	4.6
Entiat Meadows +	20A33a	4540	4/1	66	25.1	48.0	49.3
Entiat River Trail +	20A34a	3325	4/1	34	13.9	23.6	18.2
Four Mile Ridge +	20B27a	6800	4/1	60	22.8	45.2	37.8
Fox Camp +	20A36a	6510	4/1	Not Me	asured	71.6	57.8
Pope Ridge	20B20	3540	3/29	35	14.2	20.7	18.9
Pugh Ridge +	20A32a	6725	4/1	61	23.2	45.7	37.5
Shady Pass	20A37	6200	3/29	52	19.4	36.8	32.9
Snow Brushy +	20A35a	3910	4/1	67	27.5	39.2	40.3
Tommy Creek +	20B2la	4900	4/1	39	14.8	24.5	27.3
WENATCHEE RIVER							
Berne-Mill Creek	21B23	2925	3/14	70	27.3	28.0	26.1
			3/28	64	24.7	27.1	29.8
Berne-Mill Creek New SP	21B41	3240	3/28	51	21.5	18.6	28.3
Blewett Pass No. 2	20B02	4270	3/26	36	13.9	15.6	16.9
Chiwaukum G.S.	20B16	1810	3/14	36	11.9	13.4	11.3
			3/28	31	8.1	8.9	10.2
Fish Lake	21B04	3371	3/28	62	26.6	26.5	35.3
Lake Wenatchee	20B05	1970	3/14	44	15.9	17.0	15.4
			3/28	36	13.0	13.4	12.9
Leavenworth R.S.	20B17	1127	3/13	16	5.2	0.8	2.2
			3/30	0	0.0	0.0	0.6
Lyman Lake	20A23A				eport	59.3	65.5
Merritt	20B18	2140	3/14	52	19.0	21.4	16.0
			3/28	45	16.7	12.9	15.5
Stevens Pass	21B01	4070	3/14	100	40.6	50.0	52.3
			3/28	92	40.9	46.3	54.9
Stevens Pass Sand Shed	21B45	3700	3/14	77	31.3	33.5	37.5
			3/28	69	30.4	32.0	39.5

[#] Average based on 1963-77 average

⁺ Snow water equivalent estimated from aerial stadis observation

SNOW				THIS YEAR		PAST RECORD		
DRAINAGE BASIN and/or SNOW	COURSE		Date	Snow Depth	Water Content	Water Conte	nt (inches)	
NAME	Number	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average ‡	
SQUILCHUCK CREEK								
Beehive Springs	20B03	4400	3/29	25	7.4	7.1	7.9	
Scout-A-Vista	20B04	3400	3/29	22	5.3	7.3	7.3	
STEMILT CREEK								
Jump-Off	20B08	4450	3/28	28	9.0	10.8	8.2	
Stemilt Slide	20B06	5000	3/28	33	11.1	13.7	13.7	
Upper Wheeler	20B07	4400	3/28	21	6.9	7.3	8.7	
COLOCKUM CREEK								
Colockum Creek Upper	20B22	5300	3/28	27	9.3	14.3	15.1	
Colockum Creek Lower	20B23	4300	3/28	28	8.8	10.5	9.9	
Trough # 2 SP	20B25	5310	3/28	33	10.5	18.0	6.0	
YAKIMA RIVER								
Ahtanum R.S.	21C11	3100	3/28	14	4.2	4.4	6.0	
Big Boulder Creek	21B09	3200	3/28	36	13.1	10.0	20.1	
Blewett Pass No. 2	20B02	4270	3/26	36	13.9	15.6	16.9	
Bumping Lake	21C08	3450	3/13	35	11.2	13.6	17.1	
• •			3/29	29	9.5	10.0	16.5	
Bumping Lake New	21C36	3400	3/13	46	14.6	16.9	22.0	
			3/29	39	13.1	14.5	21.7	
Cayuse Pass	21C06	5300	4/5	148	63.5	70.4	90.3	
Colockum Pass	20B09	5370	3/28	28	10.2	21.0	16.6	
Cooke Creek	20Bl0	4123	3/28	0	0.0	0.0	5.1	
Corral Pass	21B13	6000	3/26	71	31.8	30.5	43.4	
Fish Lake	21B04	3371	3/28	62	26.6	26.5	35.3	
Green Lake	21C10	6000	3/28	67	24.5	32.5	34:9	
Grouse Camp	20B11	5385	3/29	35	14.1	18.4	16.6	
High Creek	20B12	2930	3/29	0	0.0	0.0	3.6	
Joe Lake +	21B46a	4624		Late F	Report	51.7	70.6	
Lake Cle Elum	21B14M	2200	3/13	24	8.9	6.5	10.0	
			3/29	14	4.8	0.0	6.7	
Lemah Creek +	21B47a	3327		Late F	Report	26.5	46.6	
Manashtash	20C01	3935	3/30	0.	0.0	0.0	3.0	
Morse Lake	21C17	5400	3/28	94	39.7	48.7	59.6	
Nanum	20B13	2340	3/29	19	5.8	0.0	8.2	
Olallie Meadows	21B02	3625	3/26	82	39.0	26.4	51.9	
Satus Pass	20D01	4030	3/30	7	2.2	0.0	9.6	
Stampede Pass SP	21B10	3860	3/15	92	39.6	43.0	41.5	
			4/2	99	41.3	29.8	43.9	

[#] Average based on 1963-77 average

⁺ Snow water equivalent estimated from aerial stadia observation

SNOW				THIS YEAR	Y	PAST R	RECORD
DRAINAGE BASIN and/or SNC	OW COURSE		Date	Snow Depth	Water Content	Water Cont	ent (inches)
NAME	Number	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average #
YAKIMA RIVER (Con-	<u>t.</u>)						
Trail Creek	20B14	3360	3/28	0	0.0	0.0	0.0
Tunnel Avenue	21B08	2450	3/14	52	19.2	15.5	25.9
			3/28	46	18.0	11.2	24.6
Van Epps Pass +	20B26a	5925	-,		Report	43.7	57.5
Walters Flat	20B15	3360	3/29	12	4.2	0.0	5.5
Waptus Lake +	21B49a		0, 25		Report	36.5	44.5
White Pass (E. Side)	21C28	4500	3/12	56	20.1	20.1	25.1
			3/27	51	17.5	17.4	26.0
AHTANUM CREEK							
Ahtanum R.S.	21C11	3100	3/28	14	4.2	4.4	6.0
Green Lake	21C10	6000	3/28	67	24.5	32.5	34.9
LOWEI	R COL	UMB	I A D	RAIN	AGE		
ASOTIN CREEK							
Spruce Springs	17C04	5700	3/26	58	22.9	18.5	26.4
MILL CREEK							
Homestead	17C01	4030	3/28	22	9.1	0.0	8.9
Martin Springs	17C02	4400	3/28	38	14.9	3.5	14.9
Tollgate	18D3M	5070	3/29	67	30.5	15.1	26.6
KLICKITAT RIVER							
Satus Pass	20D01	4030	3/30	7	2.2	0.0	9.6
COWLITZ RIVER							
Cayuse Pass	21C06	5300	4/5	148	63.5	70.4	90.3
White Pass (E. Side)	21C28	4500	3/12	56	20.1	20.1	25.1
			3/27	51	17.5	17.4	26.0
<u>P U</u>	GET S	SOUN	D DR	AINA	GE		
WHITE RIVER							
Cayuse Pass	21C06	5300	4/5	148	63.5	70.4	90.3
Corral Pass	21B13	6000	3/26	71	31.8	30.5	43.4
Morse Lake	21C17	5400	3/28	94	39.7	48.7	59.6

[#] Average based on 1963-77 average

⁺ Snow water equivalent estimated from aerial stadia observation

NOW				THIS YEAR	Y	PAST RECORD		
DRAINAGE BASIN and/or SNOW	COURSE		Date	Snow Depth	Water Content	Water Conte		
NAME	Number	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average #	
GREEN RIVER								
Airstrip	21B24	1800	4/5	0	0.0	0.0	2.1	
Charley Creek	21B25	1200	4/5	0	0.0	0.0	0.0	
Cougar Mountain SP	21B42	3200	3/26	33	15.6	0.0	25.1	
Grass Mtn. No. 2	21B27	2900	4/5	26	11.4	0.0	24.3	
Grass Mtn. No. 3	21B28	2100	4/5	0	0.0	0.0	4.9	
Lester Creek	21B29	3100	4/5	61	23.4	9.3	27.5	
Lynn Lake	21B50	4000	4/5	49	21.8	0.0	29.8	
Sawmill Ridge	21B31	4700	4/5	80	32.6	22.8	41.6	
Snowshoe Butte SP	21B43	5000	3/26	101	45.8	39.4	59.8	
Stampede Pass	21B10	3860	3/15	92	39.6	43.0	41.5	
			4/2	99	41.3	29.8	43.9	
Twin Camp	21B30	4100	4/5	65	27.2	10.7	27.8	
CEDAR RIVER								
City Cabin	21B03	2390	3/29	20	7.0	0.0	20.0	
Mt. Gardner	21B21	3300	3/28	18	6.5	0.0	19.8	
Mt. Lindsay	21B16	2500	3/30	34	11.9	0.0	18.2	
Mt. Washington New	21B15	3000	3/28	0	0.0	0.0	10.8	
Rex River	21B17	2400	3/29	34	12.1	0.0	17.8	
S. F. Cedar	21B06	3000	3/29	26	9.8	0.0	23.2	
Tinkham Creek	21B20	3400	3/29	33	12.7	4.7	27.9	
SNOQUALMIE RIVER								
Alpine Meadow	21B48	3500	3/28	88	40.2	18.9	55.2	
Lake Elizabeth	21B19	2900	3/27	85	37.9	19.3	50.7	
Olallie Meadows	21B02	.3625	3/26	82	39.0	26.4	51.9	
S. F. Tolt		1900		0	0.0	0.0	1.5	
SKYKOMISH RIVER								
Lake Elizabeth	21B19	2900	3/27	85	37.9	19.3	50.7	
Stevens Pass	21B01	4070	3/14	100	40.6	50.0	52.3	
	21101	4070	3/14	92	40.9	46.3	54.9	
Stevens Pass Sand Shed	21B45	3700	3/28		31.3	33.5	37.5	
beevens rass band biled	21040	3700	3/14	69.	30.4	32.0	39.5	

[#] Average based on 1963-77 average

SNOW				THIS YEAR	,	PAST RECORD	
DRAINAGE BASIN and/or Sh	IOW COURSE		Date	Snow Depti		Water Conti	ent (inches)
NAME	Number	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average #
SKAGIT RIVER							
Beaver Creek Trail	21A04	2200	3/31	27	10.1	6.2	15.4
Beaver Pass	21A01	3680	3/31	53	19.1	20.9	35.0
Brown Top Ridge +	21A28a	6000	3/31	103	35.6	55.0	74.2
Cloudy Pass +	20A22a	6500		Not M	easured	-	49.8
Devils Park	20A04	5900	3/30	88	32.4	43.8	47.7
Freezeout Creek Trail	20A01	3500	3/29	29	11.1	5.9	13.7
Freezeout Meadows New	20A38	5000	3/29	69	28.0	24.0	41.0
Granite Creek	21A29A		3/30	41	13.8	13.8	22.3
Harts Pass	20A05A	6500	3/30	88	31.9	47.4	48.7
Klesilkwa	35B-Can	3700	3/27	25	9.1	4.4	15.1*
Lyman Lake	20A23A	5900		Late	Report	59.3	65.5
Meadow Cabins	20A08	1900	3/30	16	5.8	1.5	6.6
New Hozomeen Lake	21A30	2800	3/29	32	10.8	4.7	15.2
New Tashme	26A-Can	2500	3/27	26	8.8	6.1	10.8*
Quartette Lake	34-Can	4000	3/29	32	11.0	10.6	14.6*
Rainy Pass	20A09	4780	3/30	90	28.0	43.4	43.7
Thunder Basin	20A07	4200	3/30	58	19.9	18.4	24.7
BAKER RIVER							
Dock Butte	21A11A	3800		Late 1	Report	43.2	74.5
Easy Pass	21A07A	5200			Report	86.3	88.7
Jasper Pass	21A06A	5400			Report	77.6	92.6
Marten Lake	21A09A	3600			Report	52.1	82.8
Mount Blum +	21A18a	5800			Report	61.6	65.9
Panorama New	21A26	4300	3/11	103	52.3	52.8	72.8
			3/31	104	52.3	53.5	77.0
Rocky Creek	21A12A	2100		Late I	Report	7.9	34.4
Schreibers Meadow .	21AļOA	3400		Late I	_	37.9	68.8
S. F. Thunder Creek	21A14A	2200		Late I		0.0	7.9
Watson Lakes	21A08A	4500		Late I	_	49.5	72.3

[#] Average based on 1963-77 average

^{*} Average for years of record

⁺ Snow water equivalent estimated from aerial stadia observation.

SNOW			THIS YEAR		PAST RECORD		
DRAINAGE BASIN and/or S	NOW COURSE		Date	Snow Depth	Water Content	Water Conte	
NAME	Number	Elevation	of Survey	(Inches)	(Inches)	Last Year	Average #
NOOKSACK RIVER							
Bald Mountain +	21A19a	4400	3/27	96	43.4	38.5	60.0
Canyon +	21A20a	5100	3/27	98	43.9	38.5	73.9
Glacier Creek	21A23	3700	3/29	51	21.5	4.8	19.9
Panorama New	21A26	4300	3/11	103	52.3	52.8	72.8
			3/31	104	52.3	53.5	77.0
Twin Lakes +	21 A 21a	5200	3/27	116	52.2	38.5	84.4
DUNGENESS RIVER	OLYM	PIC	PENI	NSUI	<u>, A</u>		
Deer Park	23B04	5200	3/27	46	19.1	11.6	22.9
MORSE CREEK Cox Valley	23B14	4500	3/29	75	30.8	28.0	44.3
ELWHA RIVER Hurricane	23B03	4500	3/29	48	17.5	11.9	26.9

[#] Average based on 1963-77 average

⁺ Snow water equivalent estimated from aerial stadia observation



Agencies Assisting with Snow Surveys

GOVERNMENT AGENCIES

Canada:

Ministry of the Environment, Water Investigations Branch, Victoria, British Columbia

States:

Washington State Department of Ecology Washington State Department of Natural Resources

Federal:

Department of the Army
Corps of Engineers

II S Department of Agricult

U. S. Department of Agriculture Forest Service

U. S. Department of Commerce NOAA, National Weather Service

U. S. Department of the Interior
Bonneville Power Administration
Bureau of Reclamation
Geological Survey
National Park Service

PUBLIC AND PRIVATE UTILITIES

Chelan County P.U.D.
Pacific Power and Light Company
Puget Sound Power and Light Company
Washington Water Power Company

OTHER PUBLIC AGENCIES

Okanogan Irrigation District Wenatchee Heights Irrigation District

MUNICIPALITIES

City of Tacoma City of Seattle

ROOM 360, U.S. COURT HOUSE SPOKANE, WASHINGTON 99201

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, 5300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF
AGRICULTURE
AGR-1 01



FIRST CLASS MAIL

FEDERAL - STATE - PRIVATE

COOPERATIVE SNOW SURVEYS

Furnishes the basic data necessary for forecasting water supply for irrigation, domestic and municipal water supply, hydro-electric power generation, navigation, mining and industry

"The Conservation of Water begins with the Snow Survey"

CUPPENT SERIAL RECORDS

APR 19 779

U.S. PEPT FAGRICUL TURI NA FL AGRIC, FIBRARY RECEIVED